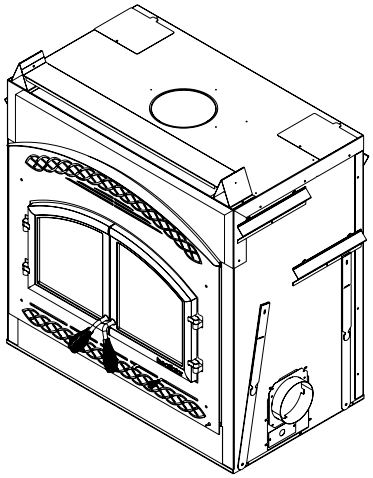
heatilator
The first name in fireplaces

Owner's Manual
Installation and Operation

CONSTITUTION
EPA CERTIFIED
WOODBURNING FIREPLACE

Model:
C40

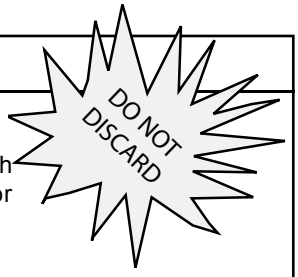


Tested and Listed by OTL Portland Oregon USA
C US
OMNI-Test Laboratories, Inc.

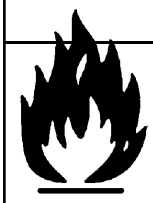
CAUTION

DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.



⚠ WARNING



If the information in these instructions is not followed exactly, a fire may result causing property damage, personal injury, or death.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- Do not overfire - If heater or chimney connector glows, you are overfiring. Overfiring will void your warranty.
- Comply with all minimum clearances to combustibles as specified. Failure to comply may cause house

⚠ WARNING

HOT SURFACES!

Screen/mesh, glass doors and other surfaces are hot during operation AND cool down.

Hot screen/mesh and glass doors will cause burns.

- **DO NOT** touch screen/mesh or glass doors until cooled
- NEVER allow children to touch screen/mesh or glass doors
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other flammable materials away.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends NFI certified professionals, or technicians supervised by an NFI certified professional.

NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED

Wood Energy Technical Training

⚠ WARNING

Fire Risk.

For use with solid wood fuel only.
Other fuels may overfire and generate poisonous gases (i.e. carbon monoxide).

Read this manual before installing or operating this appliance.
Please retain this owner's manual for future references.

Congratulations

Congratulations on selecting a Heatilator wood burning fireplace. The Heatilator fireplace you have selected is designed to provide the utmost in safety, reliability, and efficiency.

As the owner of a new fireplace, you'll want to read and carefully follow all of the instructions contained in this *Owner's Manual*. Pay special attention to all Cautions and Warnings.

This Owner's Manual should be retained for future reference. We suggest that you keep it with your other important documents and product manuals.

Your new Heatilator wood burning fireplace will give you years of durable use and trouble-free enjoyment. Welcome to the Heatilator family of fireplace products!

Homeowner Reference Information

We recommend that you record the following pertinent information about your appliance.

Model Name: _____ Date purchased/installed: _____

Serial Number: _____ Location on appliance: _____

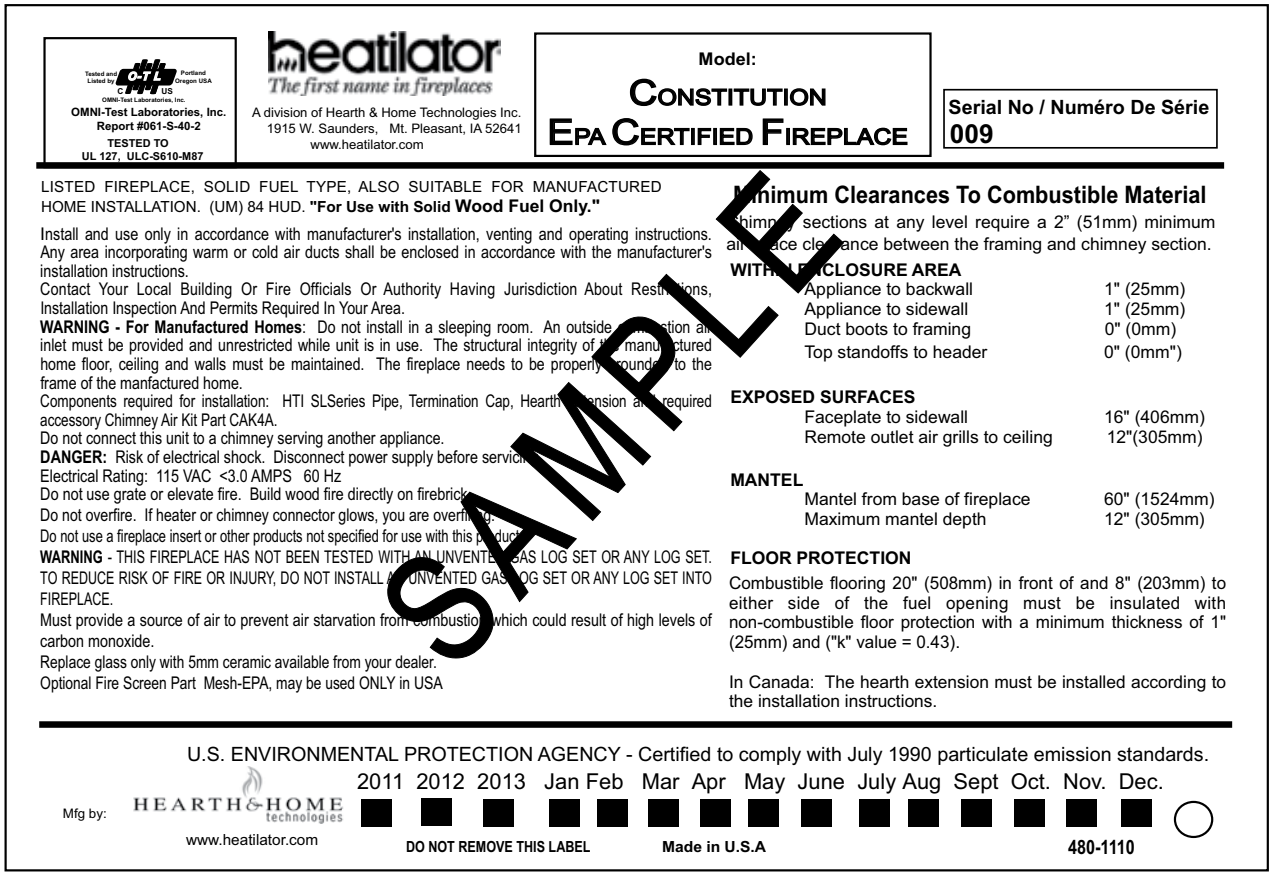
Dealership purchased from: _____ Dealer Phone: _____

Notes: _____

_____

Listing Label Information/Location

The model information regarding your specific appliance can be found on the rating plate usually located in the control area of the appliance.



OMNI-Test Laboratories, Inc.
Report #061-S-40-2
TESTED TO
UL 127, ULC-S610-M87

heatilator
The first name in fireplaces
A division of Hearth & Home Technologies Inc.
1915 W. Saunders, Mt. Pleasant, IA 52641
www.heatilator.com

Model:
CONSTITUTION
EPA CERTIFIED FIREPLACE

Serial No / Numéro De Série
009

LISTED FIREPLACE, SOLID FUEL TYPE, ALSO SUITABLE FOR MANUFACTURED HOME INSTALLATION. (UM) 84 HUD. **"For Use with Solid Wood Fuel Only."**

Install and use only in accordance with manufacturer's installation, venting and operating instructions. Any area incorporating warm or cold air ducts shall be enclosed in accordance with the manufacturer's installation instructions.
Contact Your Local Building Or Fire Officials Or Authority Having Jurisdiction About Restrictions, Installation Inspection And Permits Required In Your Area.
WARNING - For Manufactured Homes: Do not install in a sleeping room. An outside combustion air inlet must be provided and unrestricted while unit is in use. The structural integrity of the manufactured home floor, ceiling and walls must be maintained. The fireplace needs to be properly grounded to the frame of the manfactured home.
Components required for installation: HTI SLSeries Pipe, Termination Cap, Hearth Extension and required accessory Chimney Air Kit Part CAK4A.
Do not connect this unit to a chimney serving another appliance.
DANGER: Risk of electrical shock. Disconnect power supply before servicing.
Electrical Rating: 115 VAC <3.0 AMPS 60 Hz
Do not use grate or elevate fire. Build wood fire directly on firebrick floor.
Do not overfire. If heater or chimney connector glows, you are overfiring.
Do not use a fireplace insert or other products not specified for use with this product.
WARNING - THIS FIREPLACE HAS NOT BEEN TESTED WITH AN UNVENTED GAS LOG SET OR ANY LOG SET. TO REDUCE RISK OF FIRE OR INJURY, DO NOT INSTALL AN UNVENTED GAS LOG SET OR ANY LOG SET INTO FIREPLACE.
Must provide a source of air to prevent air starvation from combustion which could result of high levels of carbon monoxide.
Replace glass only with 5mm ceramic available from your dealer.
Optional Fire Screen Part Mesh-EPA, may be used ONLY in USA

Minimum Clearances To Combustible Material

Chimney sections at any level require a 2" (51mm) minimum air space clearance between the framing and chimney section.

WITH ENCLOSURE AREA

Appliance to backwall	1" (25mm)
Appliance to sidewall	1" (25mm)
Duct boots to framing	0" (0mm)
Top standoffs to header	0" (0mm")

EXPOSED SURFACES

Faceplate to sidewall	16" (406mm)
Remote outlet air grills to ceiling	12"(305mm)

MANTEL

Mantel from base of fireplace	60" (1524mm)
Maximum mantel depth	12" (305mm)

FLOOR PROTECTION

Combustible flooring 20" (508mm) in front of and 8" (203mm) to either side of the fuel opening must be insulated with non-combustible floor protection with a minimum thickness of 1" (25mm) and ("k" value = 0.43).

In Canada: The hearth extension must be installed according to the installation instructions.

SAMPLE

U.S. ENVIRONMENTAL PROTECTION AGENCY - Certified to comply with July 1990 particulate emission standards.

2011 2012 2013 Jan Feb Mar Apr May June July Aug Sept Oct. Nov. Dec.

Mfg by: HEARTH&HOME technologies
www.heatilator.com

DO NOT REMOVE THIS LABEL Made in U.S.A 480-1110

Safety Alert Key:

- ***DANGER!*** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- ***WARNING!*** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- ***CAUTION!*** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- ***NOTICE:*** Indicates practices which may cause damage to the fireplace or to property.

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Hearth & Home Technologies Inc.
LIMITED LIFETIME WARRANTY

Hearth & Home Technologies Inc., on behalf of its hearth brands (”HHT”), extends the following warranty for HHT gas, wood, pellet, coal and electric hearth appliances that are purchased from an HHT authorized dealer.

WARRANTY COVERAGE:

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

WARRANTY PERIOD:

Warranty coverage begins on the date of original purchase. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/ distributor, whichever occurs earlier. The warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood, pellet, and coal appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting							Components Covered
Parts	Labor	Gas	Wood	Pellet	EPA Wood	Coal	Electric	Venting	
1 Year		X	X	X	X	X	X	X	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years				X	X	X			Igniters, electronic components, and glass
		X	X	X	X	X			Factory-installed blowers
			X						Molded refractory panels
3 years				X					Firepots and burnpots
5 years	1 year			X	X				Castings and baffles
7 years	3 years		X	X	X				Manifold tubes, HHT chimney and termination
10 years	1 year	X							Burners, logs and refractory
Limited Lifetime	3 years	X	X	X	X	X			Firebox and heat exchanger
90 Days		X	X	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions, and limitations on next page.

WARRANTY CONDITIONS:

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

WARRANTY EXCLUSIONS:

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, wood, pellet and coal gaskets, firebricks, grates, flame guides, light bulbs, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth components or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

This warranty is void if:

- The appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF LIABILITY:

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.

1 Listing and Code Approvals

A. Appliance Certification

This fireplace system has been tested and listed in accordance with UL127 and ULC-S610-M87 and (UM) 84-HUD standards, and has been listed by OMNI Test Laboratory Inc., for installation and operation in the United States and Canada as described in this manual. This fireplace has been tested and listed for use with the SL-300 Series chimney (with the CAK4A Air Kit) and fireplace components listed in Section 12.

Check with your local building code agency before you begin your installation to ensure compliance with local codes, including the need for permits and follow-up inspections. Be sure local building codes do not supersede UL specifications and always obtain a building permit so that insurance protection benefits cannot be unexpectedly cancelled.

Heatilator is a registered trademark of Hearth & Home Technologies Inc.

Model:	Constitution EPA Certified Woodburning Fireplace
Laboratory:	OMNI Test Laboratories, Inc.
Report No:	061-S-50-2
Type:	Wood Fireplace
Standard:	UL127 and ULC-S610-M87 and (UM) 84-HUD, Manufactured Home Approved.

WARNING! Risk of Fire! *Improper installation of wood inserts may cause fireplace or chimney system to overheat.*

B. Manufactured Home Approved

This appliance is approved for manufactured home installations when not installed in a sleeping room and when an outside combustion air inlet is provided. THE STRUCTURAL INTEGRITY OF THE MANUFACTURED HOME FLOOR, CEILING, AND WALLS MUST BE MAINTAINED. The fireplace must be properly grounded to the frame of the manufactured home. Outside Air must be installed in a manufactured home installation.

An outside air termination cap is supplied with your Constitution Fireplace for installation in a manufactured home. If you use an alternative material it must be designed to prevent material from dropping into the area beneath the manufactured home, and to prevent rodents from entering from the outside.

1. An outside air inlet must be provided for combustion and must remain clear of leaves, debris, ice and/or snow. It must be unrestricted while unit is in use to prevent room air starvation which can cause smoke spillage and an inability to maintain a fire. Smoke spillage can also set off smoke alarms.
2. The fireplace is to be secured to the manufactured home structure. Use same holes that attached the fireplace to the pallet to secure it to the floor using 1/4 in. x 2 in. (6 mm x 51 mm) lag bolts or equivalent.
3. Unit must be grounded with #8 solid copper grounding wire or equivalent and terminated at each end with N.E.C. approved grounding device.
4. Refer to Minimum Clearances to Combustibles on pages 36-37 and chimney components on pages 64-65
5. Floor protections requirements on pages 54-56 must be followed precisely.
6. Use silicone to create an effective vapor barrier at the location where the chimney or other component penetrates to the exterior of the structure.
7. If unit burns poorly while an exhaust fan is on in home, (i.e., range hood), increase combustion air.

NOTICE: *Top sections of chimney must be removable to allow maximum clearance of 13.5 ft (411 cm) from ground level for transportation purposes.*

WARNING! Risk of Fire or Asphyxiation!

DO NOT INSTALL IN SLEEPING ROOM

Caution! *Maintain structural intergrity of manufactured home:*

- *Floor, wall, ceiling and /or roof.*
- *Any supporting materal that would affect the structural integrity.*
- *Do NOT cut through:*
  Floor joist, wall, studs or ceiling trusses.

Warning! Risk of Fire!
For use with solid wood fuel only.
Other fuels may overfire and generate poisonous gases (i.e. carbon monoxide).

C. BTU & Efficiency Specifications

EPA Certified:	3.25 grams per hour
Efficiency:	up to 77.8%
BTU Output **with EPA test fuel:** **with cord wood:**	 51,400/ hr. 70,000/hr
Vent Size:	8 inches
Firebox Size:	2.7 cubic feet
Max Wood Length:	24 inches
Fuel:	Cord Wood
Shipping Weight:	650 lbs

NOTICE: *This fireplace is tested and approved as a decorative fireplace. It should not be factored as a primary heat source in residential heating calculations.*

D. Non-Combustible Materials

- Materials which will not ignite and burn, composed of any combination of the following:
  - Steel - Iron
  - Brick - Tile
  - Concrete - Slate
  - Glass - Plasters
- Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace at 750° C**

E. Combustible Materials

- Materials made of or surfaced with any of the following materials:
  - Wood - Compressed paper
  - Plant fibers - Plastic
- Any material that can ignite and burn; flame proofed or not, plastered or un-plastered

F. Electrical Codes

NOTICE: *This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with* **National Electric Code ANSI/ NFPA 70-latest edition** *or the* **Canadian Electric Code CSA C22.1.**

- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in damp locations.

Electrical Codes are used only if the unit is supplied with a fan.

G. Glass Specifications

This fireplace is equiped with 5mm ceramic glass. Replace glass only with 5mm ceramic glass. Please contact your dealer for replacement glass

NOTICE: *This installation must conform with local codes. In the absence of local codes you must comply with the UL127, (UM) 84-HUD and NFPA211 in the U.S.A. and the ULC 610-M87 and CAN/CSA-B365 Installation Codes in Canada.*

WARNING! Risk of Fire! *Hearth & Home Technologies disclaims any responsibility for, and the warranty and agency listing will be voided by the following actions.*

DO NOT:

- *install or operate damaged fireplace*
- *modify fireplace*
- *install other than as instructed by Hearth & Home Technologies*
- *operate the fireplace without fully assembling all components*
- *overfire*
- *install an unvented gas log set*
- *install any component not approved by Hearth & Home Technologies*
- *install parts or components not Listed or approved*

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified installer, service agency or your dealer.

User Guide

2 Operating Instructions

⚠ WARNING

HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

Hot glass will cause burns.

- **DO NOT** touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

High temperatures may ignite clothing or other flammable materials.

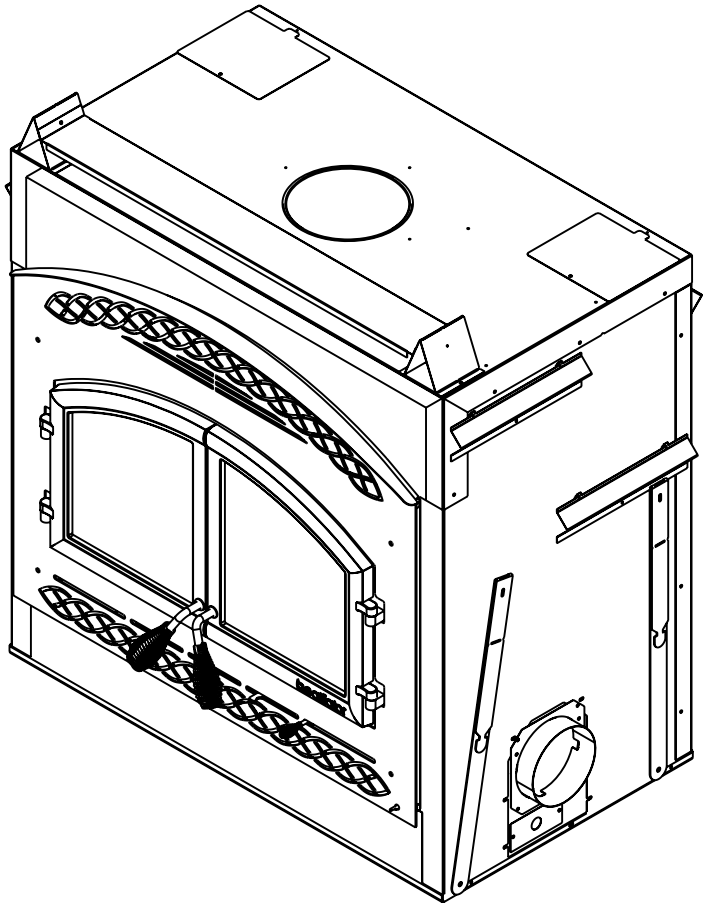
- Keep clothing, furniture, draperies and other flammable materials away.

If you expect that children may come into contact with this fireplace, we recommend a barrier such as a decorative screen. See your dealer for suggestions.

A. Your Fireplace

***WARNING! DO NOT** operate fireplace before reading and understanding operating instructions. Failure to operate fireplace according to operating instructions could cause fire or injury.*

ALL wiring should be done by a qualified electrician and shall be in compliance with local codes and with the National Electric Code NFPA/NEC No. 70-current (in the United States), or with the current CSC22.1 Canadian Electric Code (in Canada).



B. General Information

Fireplaces, as well as other woodburning appliances, have been used safely for many years. It has been our experience that most problems are caused by improper installation and operation of the fireplace. Make certain that installation and operation of the fireplace system is in accordance with these instructions.

It is extremely important that the fire be supervised whenever the fireplace is in use. It is also recommended that an annual inspection be performed on the fireplace system to determine if the flue system needs to be cleaned, or as in the case of any appliance, if minor repairs are required to maintain the system in top operating condition.

WARNING! Risk of Fire! *Keep combustible materials, gasoline and other flammable vapors and liquids clear of the fireplace.*

DO NOT:

- *store flammable materials close to the fireplace*
- *use gasoline, lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or "freshen up" a fire in this fireplace.*

C. Baffle and Blanket Placement

Ensure correct baffle placement and replace baffle components if damaged or missing.

Firebox damage due to improper baffle placement is not covered by warranty. Operate the wood burning appliance with the baffle in the correct position only. Not doing so could result in:

- Reduced efficiency
- Overheating the chimney
- Overheating the rear of the firebox
- Poor performance

CORRECT POSITION

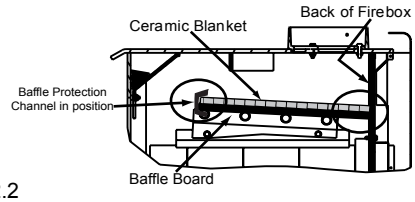
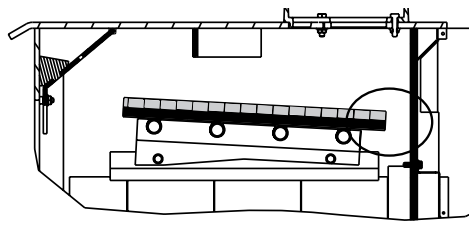


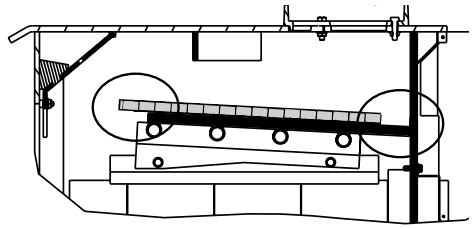
Figure 2.2

Ceramic Blanket and Baffle Board MUST be in contact with the back of the firebox and even with each other in the front. Baffle Protection Channel MUST be in position.

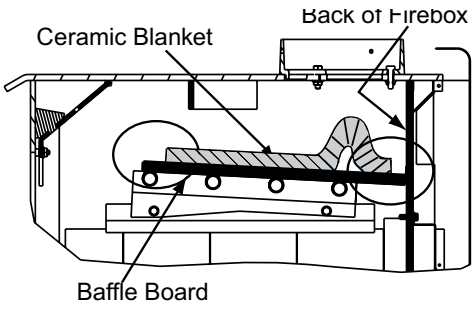
INCORRECT POSITIONS



Ceramic Blanket and Baffle Board are NOT in contact with the back of the firebox.



Ceramic Blanket is NOT in contact with the back of the firebox and NOT even with the Baffle Board in the front.



Ceramic Blanket is bunched up at the back of the firebox and NOT even with the Baffle Board in the front.

Figure 2.3

D. Firebrick Placement

The firebox of your fireplace is lined with high quality firebrick, which has exceptional insulating properties. Do Not use a grate; simply build a fire on the firebox floor. Do not operate the fireplace without bricks. Make sure bricks are installed as shown in Section 4, page 24.

E. Wood Fuel

Hardwood vs. Softwood

Your fireplace's performance depends a great deal on the quality of the firewood you use. Contrary to popular belief, one species of wood varies very little to the other in terms of energy content. All seasoned wood, regardless of species, contains about 8,000 BTU's per pound. The important factor is that hardwoods have a greater density than softwoods. Therefore, a piece of hardwood will contain about 60% more BTU's than an equal size piece of softwood. Since firewood is commonly sold by the cord (128 cu. ft) a volume measurement, a cord of seasoned oak (hardwood) would contain about 60% more potential energy than a cord of seasoned pine (softwood).

There are many definitions of hardwood and softwood. Although not true in every case, one of the most reliable is to classify them as coniferous or deciduous. Softwoods are considered coniferous. These are trees with needle-like leaves that stay green all year and carry their seeds exposed in a cone. Examples of softwood trees are Douglas fir, pine, spruce and cedar. Softwoods, being more porous, require less time to dry, burn faster and are easier to ignite than hardwoods. Deciduous trees are broadleaf trees that lose their leaves in the fall. Their seeds are usually found within a protective pod or enclosure. Hardwoods fall into this category. Some examples of deciduous trees are oak, maple, apple, and birch. However, it should be noted that there are some deciduous trees that are definitely not considered hardwoods such as poplar, aspen and alder. Hardwoods require more time to season, burn slower and are usually harder to ignite than softwoods. Obviously, you will use the type of wood that is most readily available in your area. However, if at all possible the best arrangement is to have a mix of softwood and hardwood. This way you can use the softwood for starting the fire giving off quick heat to bring the appliance up to operating temperature. Then add the hardwood for slow, even heat and longer burn time.

Soft woods	Hard woods
• Douglas Fir	• Oak
• Pine	• Maple
• Spruce	• Apple
• Cedar	• Birch
• Poplar	
• Aspen	
• Alder	

Moisture content

Regardless of which species of wood you burn, the single most important factor that affects the way your fireplace operates is the amount of moisture in the wood. The majority of the problems fireplace owners experience are caused by trying to burn wet, unseasoned wood. Freshly cut wood can be as much water as it is wood, having a moisture content of around 50%. Imagine a wooden bucket that weighs about 8 pounds. Fill it with a gallon of water, put it in the firebox and try to burn it. This sounds ridiculous but that is exactly what you are doing if you burn unseasoned wood. Dead wood lying on the forest floor should be considered wet, and requires full seasoning time. Standing dead wood can be considered to be about two-thirds seasoned, if cut at the dry time of the year.

The problems with burning wet, unseasoned wood are two fold. First, you will receive less heat output from wet wood because it requires energy in the form of heat to evaporate the water trapped inside. This is wasted energy that should be used for heating your home. Secondly, this moisture evaporates in the form of steam which has a cooling effect in your firebox and chimney system. When combined with tar and other organic vapors from burning wood it will form creosote which condenses in the relatively cool firebox and chimney. See the maintenance section of this manual for more information regarding creosote formation and need for removal.

Even dry wood contains at least 15% moisture by weight, and should be burned hot enough to keep the chimney hot for as long as it takes to dry the wood out - about one hour. To tell if wood is dry enough to burn, check the ends of the logs. If there are cracks radiating in all directions from the center, it is dry. If your wood sizzles in the fire, even though the surface is dry, it may not be fully cured.

Seasoning

Seasoned firewood is nothing more than wood that is cut to size, split and air dried to a moisture content of around 20%. The time it takes to season wood varies from around nine months for soft woods to as long as eighteen months for hardwoods. The key to seasoning wood is to be sure it has been split, exposing the wet interior and increasing the surface area of each piece. A tree that was cut down a year ago and not split is likely to have almost as high a moisture content now as it did when it was cut.

WARNING! Risk of Fire!

- ***DO NOT BURN WET OR GREEN WOOD.***
- ***WET, UNSEASONED WOOD CAN CAUSE ACCUMULATION OF CREOSOTE.***

Seasoned Wood

- Cut logs to size
- Split to 6 in. (152 mm) or less
- Air dry to a moisture content of around 20%
  - Soft wood - about nine months
  - Hard wood - about eighteen months

NOTICE: *Seasoning time may vary depending on drying conditions.*

Storing Wood

Splitting wood before it is stored reduces drying time. The following guideline will ensure properly seasoned wood:

- Stack the wood to allow air to circulate freely around and through the woodpile.
- Elevate the woodpile off the ground to allow air circulation underneath.
- The smaller the pieces, the faster the drying process. Any piece over 6 in. (152 mm in diameter should be split.
- Wood should be stacked so that both ends of each piece are exposed to air, since more drying occurs through the cut ends than the sides. This is true even with wood that has been split.
- Store wood under cover, such as in a shed, or covered with a tarp, plastic, tar paper, sheets of scrap plywood, etc., as uncovered wood can absorb water from rain or snow, delaying the seasoning process. Avoid covering the sides and ends completely. Doing so may trap moisture from the ground and impede air circulation.

WARNING! Fire Risk! DO NOT *store wood:*

- *In front of the fireplace.*
- *In space required for loading or ash removal.*

F. Outside Air

A source of air (oxygen) is required in order for combustion to take place. Whatever air is consumed by the fire must be replaced through cracks around windows, under doors, etc. Most newly constructed houses or existing homes fitted with tightly sealed doors and windows are relatively air tight. In this case, an outside air source must be made available to feed combustion air from outside the home.

The Constitution Fireplace comes equipped with an outside air intake to feed combustion air from outside the home, along with an outside air termination cap. The 6 in. (152 mm) solid/flex pipe is not supplied.

Outside air is required to minimize the effects of negative pressure within the structure. It is recommended to utilize the shortest duct run to optimize the performance of the Outside Air flex tubing. The outside air inlet thimble should be positioned above the ground level, and must remain clear of leaves, debris, ice and/or snow. If you live in an area that experiences deep snow levels, this must be taken into consideration when determining the height placement above ground level. It must be unrestricted while unit is in use to prevent room air starvation which can cause smoke spillage and an inability to maintain a fire. Smoke spillage can also set off smoke alarms.

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by inadequate draft due to environmental conditions, down drafts, tight sealing construction of the structure, or mechanical exhausting devices which create a negative air pressure within the structure where the fireplace is located.

An outside air control handle allows you control of the outside air inlet. This may be closed only when the fireplace is not in use to prevent cold air infiltration. Use of outside air for combustion is required to conserve heated air within the structure and to provide make up air to keep the fireplace venting properly.

See Figure 2.4 on page 12 for location and operation.

Caution!

Outside air control handle may be warm. Adjust before lighting fire.

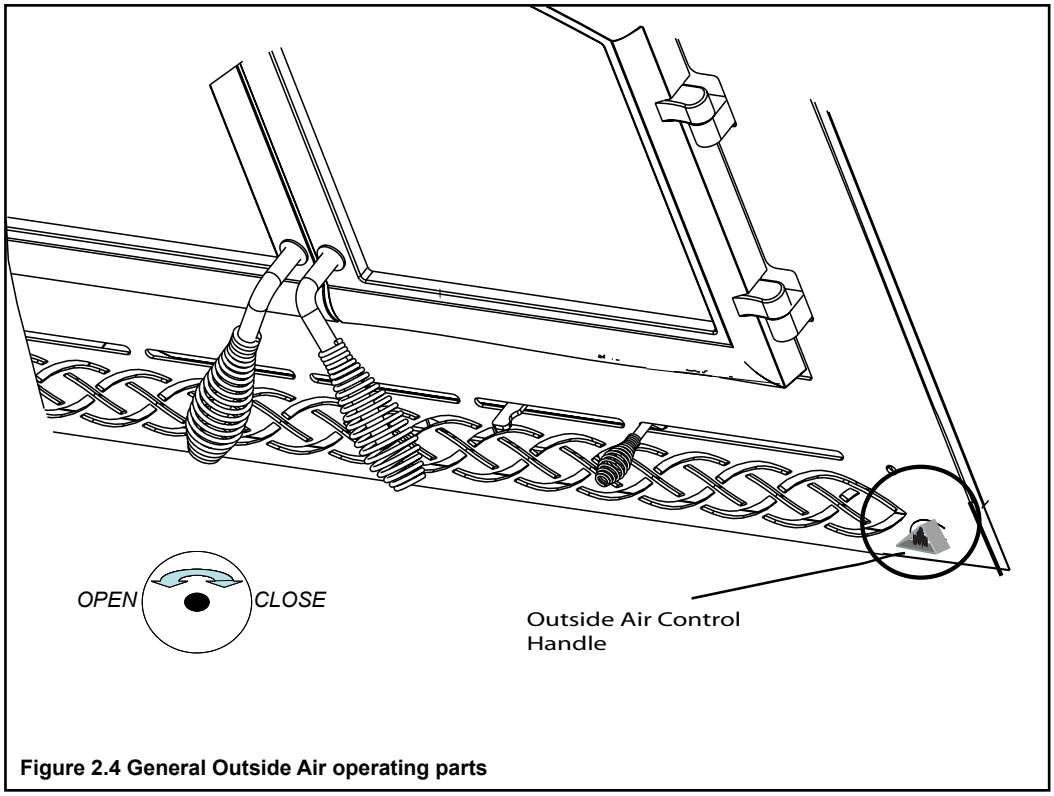


Figure 2.4 General Outside Air operating parts

G. Clear Space Near the Fireplace

Combustible materials must not be stored on the hearth extension. Room furnishings such as drapes, curtains, chairs or other combustibles must be at least 4 ft (1219mm) from the open front of the fireplace.

H. Glass Doors

This fireplace has been tested and listed for use with doors as specified in Section 12.

WARNING! Risk of Fire and Smoke! *Fireplaces equipped with doors should be operated only with doors fully open or doors fully closed. If doors are left partly open, gas and flame may be drawn out of the fireplace opening.*

WARNING! Risk of Fire! DO NOT *install and or use any component not approved by Hearth & Home Technologies Inc.*

I. Fan Operation

Fan operating instructions with Fan Override Switch in manual postition

NOTICE*: The fan is equipped with a snap disc that will turn the fan on and off depending on the temperature of the fireplace. If the fan is not coming on at the desired time, flip the override switch to manual and operate the fan as described below.*

1. **Initial (cold) Startup:** Leave fan off until your fireplace is hot and a good coal bed is established, approximately 30 minutes after fuel is lit.
2. **High Burn Setting:** The fan may be left on throughout the burn.
3. **Medium or Medium High Burn Setting:** The fan should be left off until a good burn is established, then turned on medium or high rate.
4. **Low Burn Setting:** The fan tends to cool off the fireplace. Leave fan off until the burn is well established; then, if you wish, turn the fan on at a low rate.

The override switch and the fan speed control are hard wired at time of installation and installed in a standard wall mount with junction box on the wall.

J. Fire Safety

To provide reasonable fire safety, the following should be given serious consideration:

1. Install at least one smoke detector on each floor of your home to ensure your safety. They should be located away from the heating appliance and close to the sleeping areas. Follow the smoke detector manufacturer's placement and installation instructions, and be sure to maintain regularly.
2. A conveniently located Class A fire extinguisher to contend with small fires resulting from burning embers.
3. A practiced evacuation plan, consisting of at least two escape routes.
4. A plan to deal with a chimney fire as follows:

   In the event of a chimney fire:

   a. Notify fire department

   b. Prepare occupants for immediate evacuation.

   c. Close all openings into the stove.

   d. While awaiting fire department, watch for ignition of adjacent combustibles from overheated stove pipe, hot embers or sparks from the chimney.

K. Over-Firing Your Appliance

WARNING Fire Risk! Do not over-fire

Over-firing may ignite creosote or will damage the stove and chimney.
To prevent over-firing your stove. DO NOT:

- *Use flammable liquids*
- *Overload with wood*
- *Burn trash or large amounts of scrap lumber*
- *Permit too much air to the fire.*

1. Symptoms of Over-Firing

- Symptoms of over-firing may include one or more of the following:
- Chimney connector or appliance glowing
- Roaring, rumbling noises
- Loud cracking or banging sounds
- Metal warping
- Chimney fire

2. What To Do if Your Stove is Over-Firing

- Immediately close the door and air controls to reduce air supply to the fire.
- If you suspect a chimney fire, call the fire department and evacuate your house.
- Contact your local chimney professional and have your stove and stove pipe inspected for any damage.
- Do not use your stove until the chimney professional informs you it is safe to do so.

Hearth & Home Technologies WILL NOT warranty stoves that exhibit evidence of over-firing. Evidence of over-firing includes, but is not limited to:

- Warped air tube
- Deteriorated refractory brick retainers
- Deteriorated baffle and other interior components

L. Chimney Fire

In the event of a chimney fire:

- Have the chimney and adjacent structure inspected by qualified professionals. Hearth & Home Technologies recommends that NFI or CSIA certified professionals, or technicians under the direction of certified professionals, conduct a minimum of an **NFPA 211 Level 2** inspection of the chimney.
- Replace components of the chimney and fireplace as specified by the professionals.
- Ensure all joints are properly engaged and the chimney is properly secured.

A chimney fire can permanently damage your chimney system. Failure to replace damaged components and make proper repairs creates risk of fire.

M. Starting a Fire

Before lighting your first fire in the fireplace, make certain that the baffle and the ceramic blanket are correctly positioned. It should be resting against the rear support. **Also refer to care and cleaning of plated surfaces on Section 5 before lighting your first fire.**

NOTICE- The first three or four fires should be of moderate size to allow the oils and binders to be burned from the fireplace and the refractory and paint to cure. You may notice an industrial odor the first few fires. This is considered normal.

NOTICE: REMOVE ALL LABELS FROM GLASS BEFORE LIGHTING THE FIRST FIRE IN YOUR APPLIANCE.

There are many ways to build a fire. The basic principle is to light easily-ignitable tinder or paper, which ignites the fast burning kindling, which in turn ignites the slow-burning firewood. Here is one method that works well:

1. Open Outside Air by turning the knob counter clockwise.
2. Fully open the Combustion Air Control Handle by moving it completely to the right.
3. Place serveral wads of crushed paper on the firebox floor. Heating the flue with slightly crumpled newspaper before adding kindling keeps smoke to a minimum.
4. Lay small dry sticks of kindling on top of the paper.
5. Make sure that no matches or other combustibles are in the immediate area of the fireplace. Be sure the room is adequately ventilated and the flue unobstructed.
6. Light the paper in the fireplace. **NEVER light or rekindle fireplace with kerosene, gasoline, or charcoal lighter fluid; the results can be fatal.**
7. Once the kindling is burning quickly, add several full-length logs 3 in. (76mm) or 4 in. (102mm) in diameter. Be careful not to smother the fire. Stack the pieces of wood carefully; near enough to keep each other hot, but far enough away from each other to allow adequate air flow between them.
8. Adjust the Combustion Air Control; the more you close down the control, (sliding left) the lower and slower the fire will burn. The more you open the Air Control, (sliding right) the more heat will be produced and the faster the wood will burn.

As long as there are hot coals, repeating steps 7 and 8 will maintain a continuous fire throughout the season.

NOTICE: *The special high temperature paint that your fireplace is finished with will cure as your fireplace heats. You will notice an odor and perhaps see some vapor rise from the fireplace surface; this is normal. We recommend that you open a window until the odor dissipates and paint is cured.*

NOTICE: *Fireplace should be run full open for a minimum of 30 minutes a day during heating season to keep air passages clean.*

WARNING! Risk of Fire! *Keep combustible materials, gasoline and other flammable vapors and liquids clear of the fireplace.*

DO NOT:

- *store flammable materials close to the fireplace*
- *use gasoline, lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or "freshen up" a fire in this fireplace.*

Keep all flammable liquids well away from the fireplace while it is in use. Combustible materials may ignite.

WARNING! For use with solid wood fuel only.

Other fuels may overfire and generate poisonous gases (i.e. carbon monoxide).

N. Burning Process

Fire requires 3 things to burn: fuel, air and heat. If heat is robbed from the fireplace during the drying stage, the new load of wood has reduced the chances for a good clean burn. For this reason, it is always best to burn dry, seasoned firewood. We do not advise burning unseasoned wood, however if it happens, you must open the Combustion Air Control and burn the fireplace at a high burn setting for a longer time to start it burning.

Kindling or 1st stage:

The first stage of burning is called the kindling stage. In this stage, the wood is heated to a temperature highenough to evaporate the moisture which is present in all wood. The wood will reach the boiling point of water (212°F) and will not get any hotter until the water is evaporated. This process takes heat from coals and tends to cool the fireplace.

2nd stage:

The next stage of burning, the secondary stage, is the period when the wood gives off flammable gases which burn above the fuel with bright flames. During this stage of burning it is very important that the flames be maintained and not allowed to go out. This will ensure the cleanest possible fire. If you are adjusting your fireplace for a low burn rate, you should close down the air to the point where you can still maintain some flame. If the flames tend to go out, the fireplace is set too low for your burning conditions.

Final stage:

The final stage of burning is the charcoal stage. This occurs when the flammable gases have been mostly burned and only charcoal remains. This is a naturally clean portion of the burn. The coals burn with hot blue flames.

It is very important to reload your fireplace while enough lively hot coals remain in order to provide the amount of heat needed to dry and rekindle the next load of wood. It is best to open the air control for a short while ***before reloading***. This livens up the coalbed. Open door slowly so that ash or smoke does not exit fireplace through opening. You should also break up any large chunks and distribute the coals so that the new wood is laid evenly on hot coals.

Fireplace operation does require air. Do not take air from other fuel burning appliances which can result in improper venting (smoking) or air dilution. Always provide adequate makeup air.

O. Automatic Combustion Control (ACC)

IMPORTANT! As you move the Combustion Air Control to the RIGHT, you will feel resistance about three-fourths of the way. You must move past that resistance approximately 3/4 in. (19mm) to fully engage the Automatic Combustion Control (ACC) sytstem.

With the Automatic Combustion Control system that is on this fireplace, you can set the fireplace to high (slide the Combustion Air Control all the way to the right), start the fire, and then move the Combustion Air Control to the desired burn level. The fireplace will automatically go to that level once the fire is fully established. This allows for less interaction with the fire by the homeowner and more efficient use of fuel while maintaining the desired heat output.

After the fireplace has been in operation for a period of time, and is warmed up; you may prefer to not activate the ACC when reloading fuel. if you do not slide the Combustion Air Control all the way to the right, the ACC will not be activated.

ACC OVERRIDE

The lever located to the left of the Combustion Air Control is the ACC OVERRIDE and may be used to override the setting of the Combustion Air Control. If the ACC has been activated and burn rate needs to be slowed, move the lever to the LEFT and position Combustion Air Control at the preferred setting. To close the air supply for an over fire situatution or to slow the burn rate down immediately, slide the lever to the LEFT and also slide the Combustion Air Control all the way to the left.

NOTICE**:** *If reloading a bright, hot coal bed for longer (low) burn time, setting the ACC may not be required. Burn Dry, well seasoned wood.*

NOTICE**:** *To establish your settings, always begin with the air control all the way to the left to STOP and then move it to the right for your desired setting.*

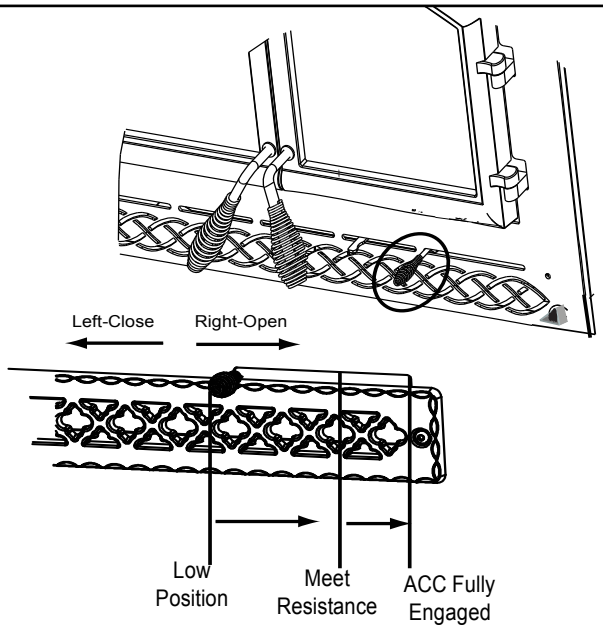


Figure 2.5 Operating the ACC Controls

***Slide Air Control**

Slide LEFT to Stop
Stop to 1/8 in. -1/2 in. open
Stop to 1/2 in. - 1-1/2 in. open
All the way to RIGHT

Notice:

THE DECORATIVE FASCIA MUST BE REMOVABLE ON YOUR FIREPLACE IN ORDER TO SERVICE THE AUTOMATIC COMBUSTION CONTROL SYSTEM.

P. Manual Timer Override

If timer is unintentionally engaged, push the Timer Override Lever to the left. This will disengage the timer and set the Fireplace back to the low setting. Figure 2.6

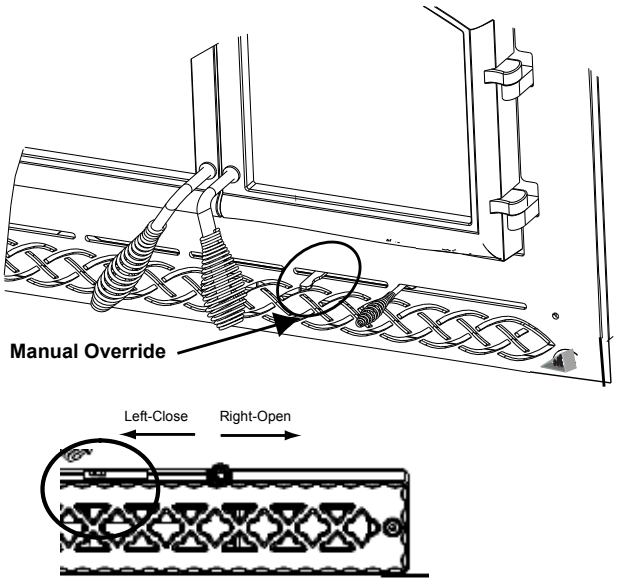


Figure 2.6 Manual Override

Q. Burning Guidelines

For maximum operating efficiency with the lowest emissions, follow these operating procedures:

1. Regardless of desired heat output, when loading the fireplace, burn your fireplace with the Combustion Air Control wide open (fully to the right) for a minimum of 5 to 15 minutes.
2. Regulate burn rate (heat output) by using the Combustion Air Control. See Figure 2.5 on page 15.
3. Heat output settings: Follow the burn rate instructions listed below.

Burn Rate	BTU / Hr	*Combustion Air Control
Low	Below 10,000	Slide LEFT to Stop
Medium	10,000 - 15,000	Stop to 1/8 in. -1/2 in. open
Medium High	15,000 - 30,000	Stop to 1/2 in. - 1-1/2 in. open
High	Maximum Heat	All the way to RIGHT

These are approximate settings, and will vary with type of wood or chimney draft.

R. Burn Rates

HIGH - Maximum Heat: Fully open (Combustin Air Control all the way to the right). It is important to do this when reloading the fireplace. Failure to do this could result in excessive emissions (smoke).

MEDIUM HIGH BURN RATE - 15,000 to 30,000 BTU: After a wood load has been burning on high for 5 to 15 minutes, close the Combustion Air Control to 1/2 in. - 1-1/2 in. (13 mm-38 mm) distance open. (Move the handle to left to stop and then to right for the proper setting).

MEDIUM - 10,000 - 15,000 BTU: After a wood load has been burning on high for 5 to 15 minutes (longer for very large pieces or wet wood), Combustion Air Control left to 1/8 in. -1/2 in. (3 mm-13 mm) distance open. (Move the handle to left to stop and then to right for the proper setting).

LOW - Below 10,000 BTU: After a wood load has been burning on high for 5 to 15 minutes (longer for very large pieces or wet wood), gradually slide the Combustion Air Control left to close down the air, making sure to maintain flames in the fireplace. It is very important to maintain flames in your fireplace during the first few hours of a low burn to avoid excessive air pollution.

S. Opacity

This is the measure of how cleanly your fireplace is burning. Opacity is measured in percent; 100% opacity is when an object is totally obscured by the smoke column from a chimney, and 0% opacity means that no smoke column can be seen. As you become familiar with your fireplace, you should periodically check the opacity. This will allow you to know how to burn your fireplace as nearly smoke-free as possible (goal of 0% opacity).

3 Troubleshooting

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by inadequate draft due to environmental conditions, down drafts, tight sealing construction of the structure, or mechanical exhausting devices which will create a negative air pressure within the structure where the fireplace is located.

A. Understanding Vent Problems

If smoke spillage occurs from a fireplace opening when the door is open and the proper chimney height, flue size, and configuration requirements for the installation have been met, there is either a leakage in the flue, a blockage in the flue, or some condition is in effect to draw smoke from the fireplace into the house. Understanding and differentiating the conditions which can cause each of these kinds of spillage problems is essential to their solution.

- Flue Leakage
  Check for improperly connected flue joints or a damaged flue joint in the chimney system. Such leakage would reduce draft (air would be drawn in through the leaks rather than through the fireplace). The result might be difficult start-up and smoky fires that might spill if other adverse draft conditions accompany this problem.

- Flue Blockage

B. Draft Problems

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by inadequate draft due to environmental conditions, windy conditions, down drafts, tight sealing construction of the structure, or mechanical exhausting devices which will create a negative air pressure within the structure where the fireplace is located.

Flue draft is measured as negative pressure in the chimney. The amount of negative pressure determines how strong the draft is. The draft is important because it draws the combustion air into the fireplace and pulls the smoke out of the chimney.

There are three basic criteria essential in establishing and maintaining flue draft:

- Availability of combustion air.
- Heat generated from the fire.
- Diameter and height of the flue system.

These three factors work together as a system to create the flue draft. Increasing or decreasing any one of them will affect the other two and thus change the amount of draft in the entire system.

If the fire is hard to start and smoke spills out of the fireplace, or you find it difficult to establish and maintain a moderately high burn rate, then the flue draft is too low and corrective measures must be taken.

Be sure you have air available for combustion and that your firewood is dry and well seasoned. Build your fires properly and according to the instructions given in operating instructions, “Starting a Fire”. Be sure your flue system is installed correctly and that it is the proper diameter and height. Check for the following:

- All chimney sections are properly installed.

- The chimney is clean and free of creosote or soot buildup.

- Make sure overhanging trees and branches are cut back within ten feet of the top of the chimney and is free of debris from animals.

- Ensure the chimney cap is clean and free of any buildup of soot or creosote. if cap is equipped with a spark arrestor screen.

- Be sure the ceramic blanket (above the baffle) and the baffle are in their proper positions

- The wood being used in dry and well seasoned.

If you still suspect you have a low draft problem it may be necessary to increase the volume of air in your flue system. Since the diameter of your flue system is matched with the size of the flue collar and should not be changed, then the height of the system must be increased. Add chimney sections a little at a time until the draft improves.

In some cases, regardless of what you do, it can still be difficult to establish the proper flue draft. This is especially evident when using an exterior factory-built chimney or exterior masonry chimney. Try placing several sheets of crumpled paper on top of your kindling as close to the flue outlet of the fireplace as possible. Light this paper first then the paper under the kindling. The heat generated from the rapidly burning paper on top of the kindling should help get the draft established.

Still other factors can affect how well your flue system performs. Neighboring structures, high winds, tall trees, even hillsides can affect air currents around the chimney. Well designed chimney caps are available that can help. Your fireplace dealer is the local expert in your area. He can usually make suggestions or discover problems that can be easily corrected allowing your fireplace to operate correctly as it has been designed, providing safe and economical heat for your home.

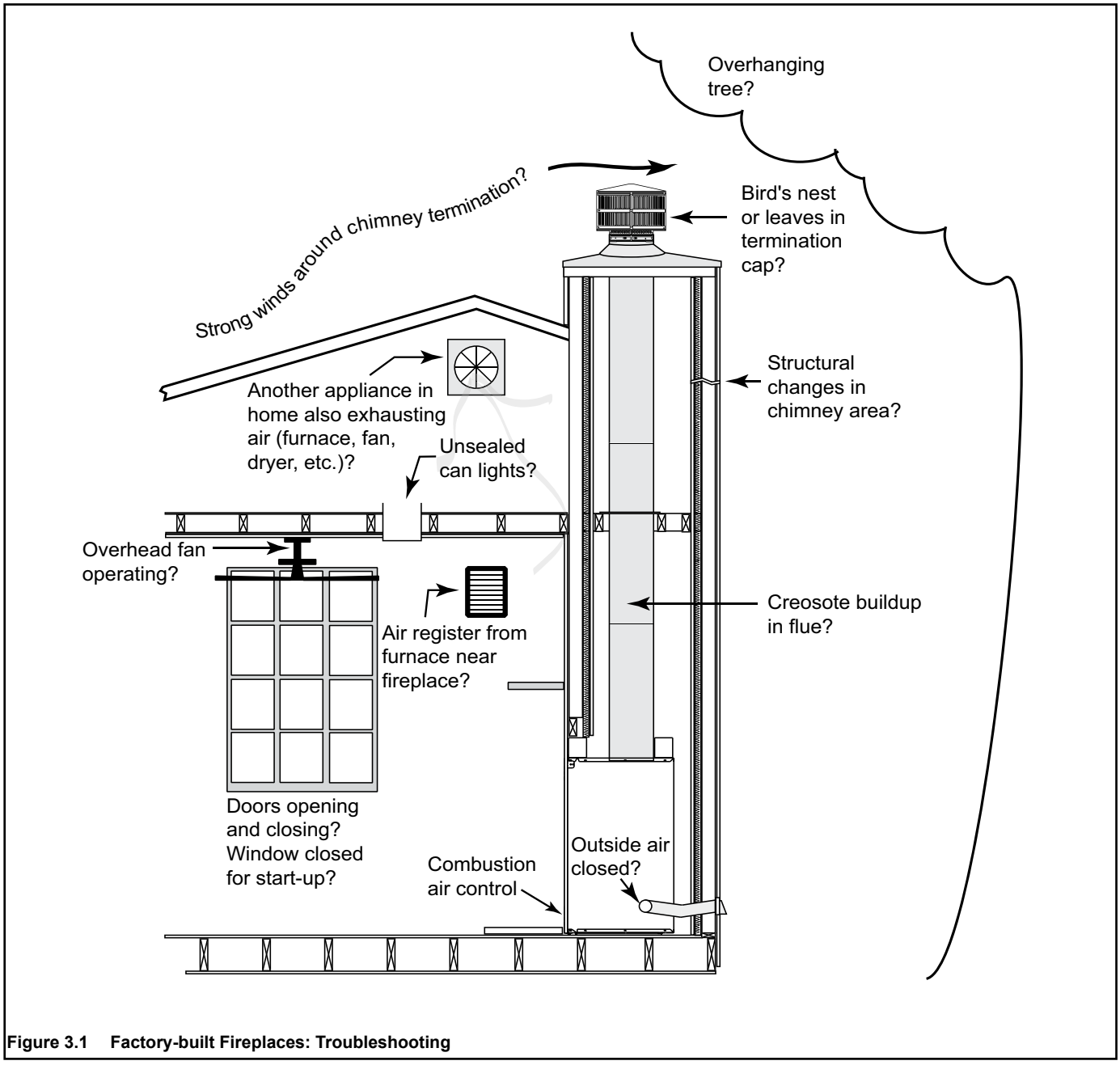

Overhanging tree?
Strong winds around chimney termination?
Bird's nest or leaves in termination cap?
Another appliance in home also exhausting air (furnace, fan, dryer, etc.)?
Structural changes in chimney area?
Unsealed can lights?
Overhead fan operating?
Creosote buildup in flue?
Air register from furnace near fireplace?
Doors opening and closing? Window closed for start-up?
Outside air closed?
Combustion air control

Figure 3.1 Factory-built Fireplaces: Troubleshooting

C. Diagnostics and Problem Solving

1. If I can't get a good fire going, what am I doing wrong?

Diagnostic Question	Possible Causes of Condition	Solutions
Are the air controls open?	• No draft • No combustion air	Open air controls
Is there enough paper?	Insufficient heat to ignite kindling	Use more paper
Is there enough kindling? Is the kindling dry?	Insufficient heat to ignite fuel	Use drier kindling
Is there enough or too much wood? Is it too large? Is it dry enough?	• Insufficient heat to establish draft • Insufficient air passage • Insufficient surface area • Ignition temperature high due to moisture	Use small split wood that is well seasoned (split, covered on top minimum 6 months, preferably a year)
Are there adequate air spaces between fuel pieces?	Insufficient combustion air and exposed surface area	Arrange kindling and wood for air movement
Is the chimney pre-warmed?	Exposed, cold chimney downdrafting	Use lighted rolled newspaper at flue opening to start upward air movement
Is there smoke in the house?	• Obstruction in chimney • Downdraft from chimney temperature or from negative house pressure	• Have chimney checked if it worked previously • Pre-warm chimney • Shut off exhaust devices • Open window slightly
Does the kindling wood not ignite?	Condition, amount, arrangement of kindling and fuel	Use more, drier, well-spaced kindling and fuel.
Does the kindling ignite, but the fuel doesn't?	• Amount of kindling • Condition of fuel	• Use more kindling • Use smaller, dry wood
Does the fuel ignite, but not burn well?	• Draft problem • Condition of fuel	• Use well-seasoned wood and sufficient amount • Turn exhaust fans off • Open window slightly

2. I smell smoke in the house after we have had a fire. What is the cause/what can I do?

Diagnostic Question	Possible Causes of Condition	Solutions
Is the chimney clean?	No: Creosote odor	Have chimney cleaned

3. I smell smoke in the house during operation. What is causing it?

Diagnostic Question	Possible Causes of Condition	Solutions
Do fires start and burn well?	No: • Chimney obstruction • Not enough kindling and/or fuel to establish draft • Inadequate combustion air • Air controls not open Yes: Competition with exhaust devices	No: • Check & clean chimney if needed • Use adequate kindling & fuel • Open air controls • Open window • Check for need for balanced air make-up (Outside Air) • Check door rope for seal. Yes: • Do not use exhaust fans during startup • Check for need for balanced air make-up (Outside Air)

4. I don’t get enough/any heat. What can I do about it?

Diagnostic Question	Possible Causes of Condition	Solutions
How much wood is used for fire?	Insufficient fuel	Make larger fires
How well seasoned is the wood?	Condition of fuel	Burn seasoned wood: (split, covered on top minimum 6 months, preferably a year) (about 20% moisture)
Did you install a fan?	Snap disc may be faulty	Replace snap disc
How much heat ouput do you expect?	• Unrealistic expectations • Heat output too low for square footage	Replace appliance with one with greater heat output
How are air controls set?	Operational problems	Follow manufacturer’s instructions

5. The wood burns too fast. What can I do?

Diagnostic Question	Possible Causes of Condition	Solutions
What is the condition of the wood?	Extremely dry wood	Mix in less seasoned wood after fire established
How are air controls set?	Operational problems	Follow manufacturer’s instructions
Fireplace won’t shut down.	ACC Timer is not working properly	Call qualified Quadra-Fire dealer

4 Maintenance and Servicing the Fireplace

A. General Maintenance

1. Creosote (Chimney) Cleaning

- **Frequency:** As necessary; at least annually before lighting stove or once every 2 months during heating season.

Formation and Need For Removal: When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a newly-started or a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote creates an extremely hot fire which may damage the chimney or even destroy the house. The chimney connector and chimney should be inspected once every 2 months during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of a chimney fire.

- **By:** Homeowner / Chimney Sweep
- **Task:** See the following instructions.

Remove all ash from the firebox and extinguish all hot embers before disposal. Allow the appliance to cool completely. Disconnect flue pipe or remove baffle and ceramic blanket from appliance before cleaning chimney. Otherwise residue can pile up on top of the baffle and ceramic blanket and the appliance will not work properly. (See Baffle Removal on page 25.) Close the door tightly. The creosote or soot should be removed with a brush specifically designed for the type of chimney in use. Clean out fallen ashes from the firebox. A chimney sweep can perform this service.

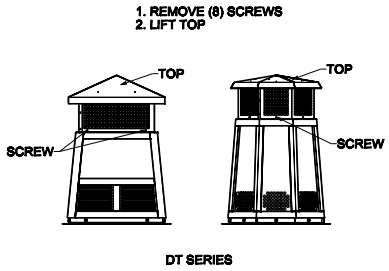
It is also recommended that before each heating season the entire system be professionally inspected, cleaned and repaired if necessary.

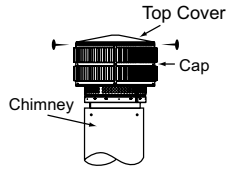
WARNING! Risk of Fire! *Ignited creosote is extremely HOT. Prevent creosote buildup.*

Inspection: Inspect the system at the appliance connection and at the chimney top. Cooler surfaces tend to build creosote deposits quicker, so it is important to check the chimney from the top as well as from the bottom.

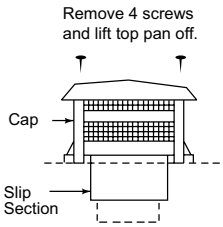
In the event of a chimney fire, Hearth & Home Technologies Inc. recommends

- replacement of the chimney, and
- inspection of the adjacent structure to the provisions of NFPA Level III inspection criteria.

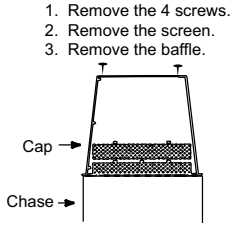




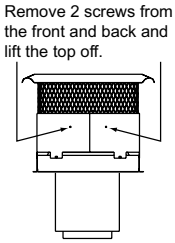
TR344/TR342
Round
Termination Cap



ST375
Square
Termination Cap



TS345/TS345P
Square
Termination Caps



TCT375
Terra Cotta
Termination Cap

Figure 4.1 Chimney & Termination Cap Cleaning

2. Disposal of Ashes

Frequency: As necessary
By: Homeowner
Task: See the following instructions.

- Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal.
- If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

WARNING! Fire Risk! *Do not use chimney cleaners or flame colorants in your appliance. Will corrode pipe.*

WARNING! Risk of Fire! *Ashes could contain hot embers.*

WARNING! Fire Risk! *Disposal of Ashes*

- *Ashes should be placed in metal container with tight fitting lid.*
- *Do not place metal container on combustible surface.*
- *Ashes should be retained in closed container until all cinders have thoroughly cooled.*

3. Glass Cleaning

Frequency: As necessary
By: Homeowner
Task: See the following instructions.

Clean glass with a non-abrasive glass cleaner. Abrasive cleaners may scratch and cause glass to crack. If the deposits on the glass are not very heavy, normal glass cleaners work well. Heavier deposits may be removed by using a damp cloth dipped in wood ashes or by using a commercially available oven cleaner. After using an oven cleaner, it is advisable to remove any residue with a glass cleaner or soap and water. Oven cleaner left on during the next firing can permanently stain the glass and damage the finish on plated metal surfaces.

A portion of the combustion air entering the firebox is deflected down over the inside of the door glass. This air flow "washes" the glass, helping to keep smoke from adhering to its surface. When operated at a low burn rate, less air will be flowing over the glass and the smoky, relatively cool condition of a low fire will cause the glass to become coated. Operating the appliance with the Burn Rate Air Control and Start-Up Air Control all the way open for 15-20 minutes should remove the built up coating.

4. Care and Cleaning of Plated Surfaces

Clean-plated surfaces with vinegar or a glass cleaner before lighting your first fire to prevent permanent staining.

CAUTION

- *Do not use polishes with abrasives.*

It will scratch plated surfaces.

CAUTION

Clean all the fingerprints and oils from the surface before firing the appliance for the first time.

- *Use a glass cleaner or vinegar and towel to remove the oils.*
- *Oils can cause permanent markings on plating, if not removed.*
- *After plating is cured, oils will not affect the finish.*

5. Door and Door Gasket

Periodically check the door gasket for proper seal. As the gasket compresses or "seats" during use, it may become necessary to adjust or tighten the door latch.

<u>To Adjust or Tighten Door Latch</u>
Remove spacing washers shown in Figure 4.2. At least one spacing washer and the black washer must be left in place.

OR

Replace the gasket material. Wear or damage to the gasket material can cause air leakage into the firebox resulting in overfiring and loss of efficiency.

A replacement gasket is available from your dealer.

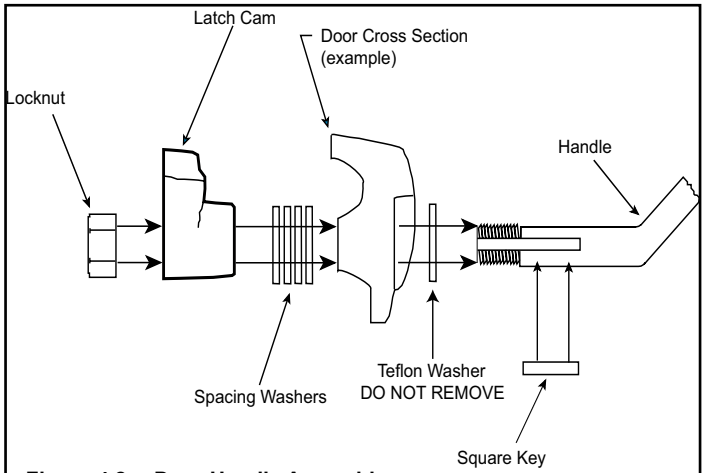


Figure 4.2 Door Handle Assembly

6. Maintenance Task List

Inspect	Maintenance Tasks
Screens	1. Assess condition of screen and replace as necessary.
	2. Verify maintenance of proper clearance to combustible household objects.
Glass Doors	1. Inspect glass panels for cracks. Replace if this condition is present.
	2. Confirm there is no damage to glass or glass frame. Replace as necessary.
	3. Inspect door rope. Confirm glass does not move around in glass frame
	4. Clean glass using a non-abrasive cleaner.
Door Rope (Dollar Bill Test)	1. Open door, place half of dollar bill inside, and close door.
	2. Attempt to pull the bill out.
	3. If the bill gives good resistance or is not removable, the rope is adjusted correctly. If the bill comes out too easily, the door rope needs adjustment to create an even thickness all the way around door.
Circulation Compartment	1. Remove any foreign objects.
	2. Verify unobstructed air circulation.
Firebox	1. Inspect condition of brick. Replace if crumbly, deteriorated, or if cracks exceed 1/4 in. (6 mm).
Chimney	1. Inspect for blockage or obstruction such as bird nests, leaves, etc.
	2. Confirm that termination cap remains clear and unobstructed by plants, etc.
	3. Verify that termination cap clearance to subsequent construction (building additions) has been maintained.
	4. Inspect for corrosion or separation.
	5. Verify weather stripping, sealing and flashing remain intact.
	6. Inspect for creosote and remove as needed. (See Section 11)

B. Replacement Maintenance

1. Glass Replacement

1. Ensure that the fire is out and the appliance is cool to the touch.
2. Protect a table or counter top with padding or towels.
3. Remove door with broken glass from the appliance by lifting door up and off of the hinges.
4. Lay door face down on a table or counter making sure handle and handle attachment knob hang over the edge of the table top so door lays flat, on a soft surface.
5. Remove screws from the top and bottom glass frames (5 on each door) using a #2 Phillips Head screwdriver. Set frames aside and retain screws.

   HINT: Soak screws in penetrating oil for easy removal.
6. Remove the glass and discard.
7. Position the new glass with edges evenly overlapping the opening in the front door.
8. Replace the glass frames. Be careful not to cross thread the screws.
9. Start screws to secure glass frames to door, keeping them loose for adjusting the glass. Then continue to tighten each screw alternately, a few turns at a time, until the glass panel is tightened snugly. DO NOT OVERTIGHTEN SCREWS.
10. Replace the door on the appliance.
11. After the first burn, recheck the tightness of the screws.

NOTICE: *REMOVE ALL LABELS FROM GLASS BEFORE LIGHTING THE FIRST FIRE IN YOUR APPLIANCE.*

2. Firebrick Replacement

The firebox of your fireplace is lined with high quality firebrick, which has exceptional insulating properties. There is no need to use a grate; simply build a fire on the firebox floor. Do not operate the fireplace without bricks.

IMPORTANT: The bricks are very similar in size. Be certain you have the proper brick in the correct location. Measure the brick size for accuracy.

After the coals are completely cooled, remove all old firebrick and ash from unit and vacuum out firebox.

1. Remove new brick set from box and lay out to diagram as shown in Figures 4.3 & 4.4**.**
2. Lay bottom bricks in unit.
3. Install rear bricks on the top of the bottom bricks. Slide top of bricks under clip on back of firebox wall and push bottom of brick back.
4. Install side bricks. Slide top of brick under clips on side of firebox and push the bottom of the brick until it is flush with the side of the unit.

#	Brick Size	Qty. In Set
1	13-1/4” x 4-1/2” x 1-1/4”	5
2	13-1/2” x 4-1/2” x 1-1/4” w/ 1-1/2” chamfer	2
3	12” x 4-1/2” x 1-1/4”	8
4	12-1/2” x 4-1/2” x 1-1/4”	2

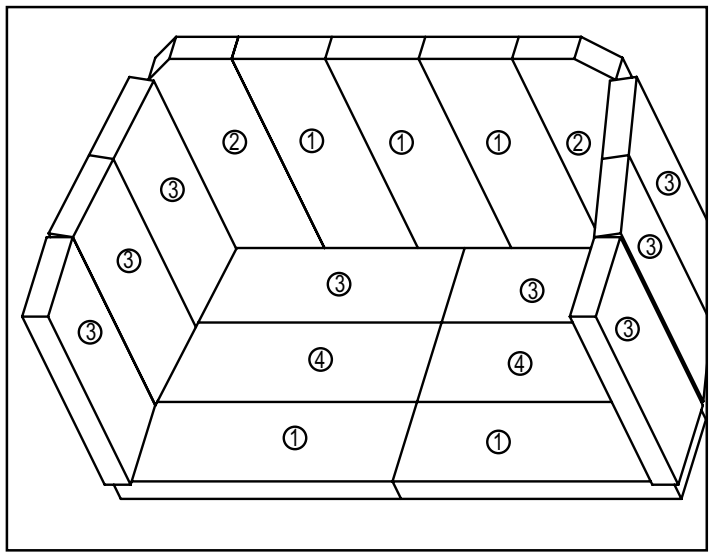


Figure 4.3 Fire Brick Configurations

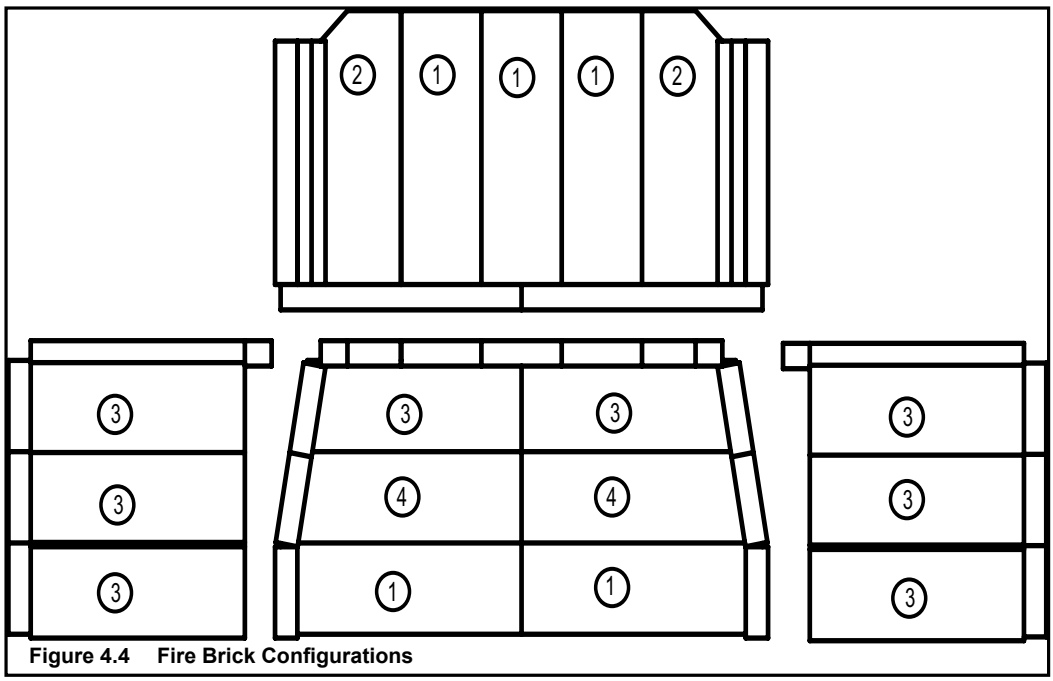


Figure 4.4 Fire Brick Configurations

3. Baffle Removal and Installation

1. Remove all ash from firebox, and extinguish all hot embers before disposal into a metal container.
2. Remove the baffle protection channel by turning it down and pulling it out of the firebox. See Figure 4.5

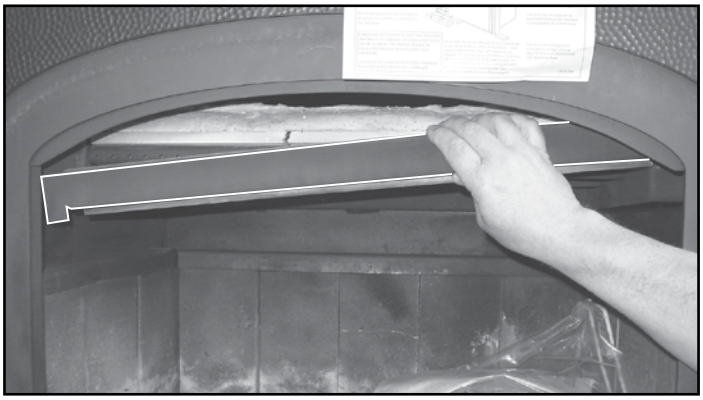


Figure 4.5 Removing Baffle Protection Channel

3. Remove ceramic blanket from above the baffle.
4. With a 3/16 in. Allen wrench, remove the front manifold tube retainer bolt on the air channel under the end of the front tube. See Figure 4.6.

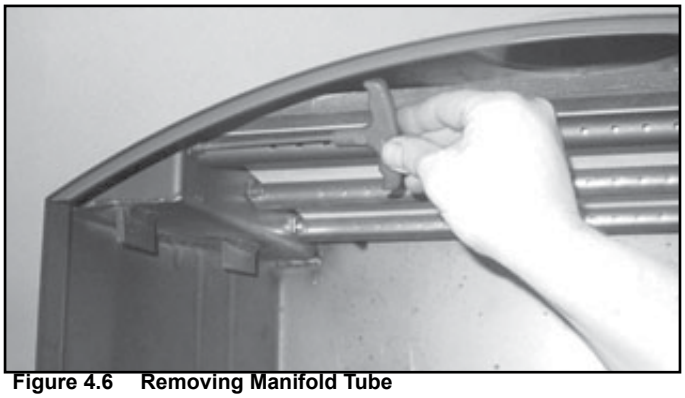


Figure 4.6 Removing Manifold Tube

***NOTICE*:** *Soak the bolt with penetrating oil for at least 15 minutes before trying to remove it.*

5. To remove manifold tube, slide the tube to one side until one end is out of its hole. Then, while lifting that end of the fiber board baffle, pull tube up over the air channel and out of hole at the other end. It is only necessary to remove the first tube in order to remove the baffle.
6. Slide fiber board baffle forward to front of fireplace and straight out through door. See Figure 4.7
7. To install the fiber board baffle, repeat steps 2 through 4 in reverse. Be sure the fiber board baffle and ceramic blanket are pushed back fully and the blanket is down and flat.

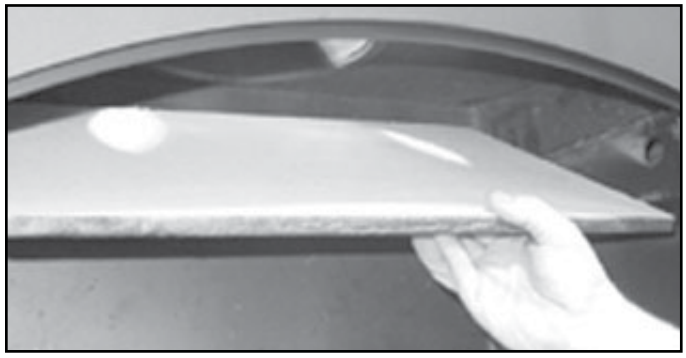


Figure 4.7 Removing Baffle *(shown without ceramic blanket)*

4. Fan Replacement

CAUTION! Shock Risk!

Circulating Fireplace Only

- *Do NOT remove grounding prong from plug.*
- *Plug directly into properly grounded three-prong receptacle.*
- *Route cord away from appliance.*
- *Do NOT route cord under or in front of appliance.*

Fan Cord Location

The Constitution Fireplace comes standard equipped with two fans, installed at the factory with electric access on the right side of fireplace (as you face it).

CAUTION! Shock Risk!

Disconnect power by turning off circuit breaker BEFORE servicing.

Fan Replacement Instructions

1. Remove the brick from the bottom of the fireplace and 3 of the back vertical bricks.
2. Remove the 2 screws from the access panel in the firebox floor. See Figure 4.8.
3. Pry up the access panel using the screwdriver slot and completely remove the panel.

Removing the fan

1. Unplug the wire harness.
2. Lift fan from locating pins and remove. Repeat for second fan if necessary. See Figure 4.9.
3. Connect new fan wires to wire harness.
4. Before installing the fan, make sure the grommets are tightly in place. Insert the right fan and place over the 2 locating pins. Repeat for other fan. Figure 4.10
5. Re-install bottom panel or firebox access panel in reverse order as described above.
6. Replace the brick that was removed.
7. Reconnect the power.

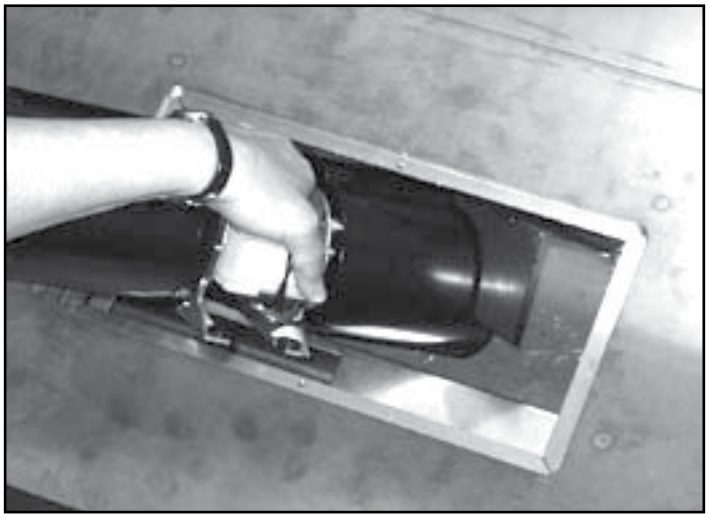


Figure 4.10 Installing Fans

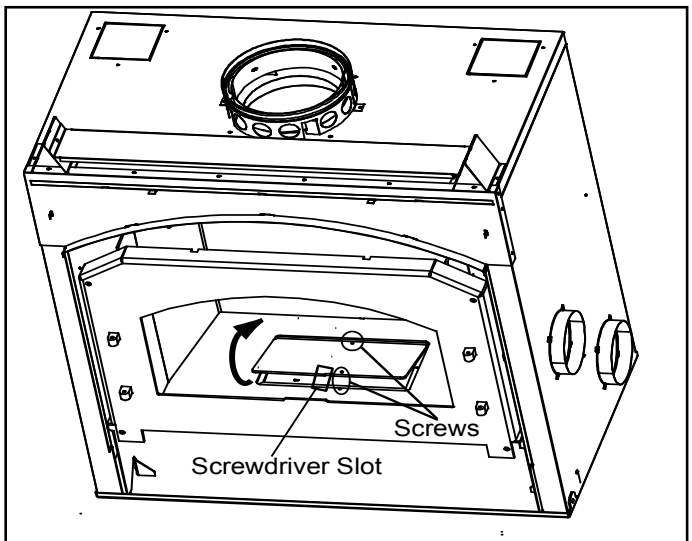


Figure 4.8 Accessing Fan Motor

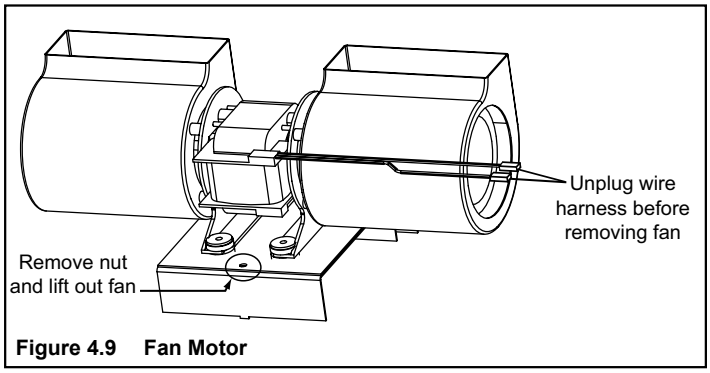


Figure 4.9 Fan Motor

5. Timer Assembly Replacement

CAUTION Shock Risk!

Disconnect power by turning off circuit breaker BEFORE servicing.

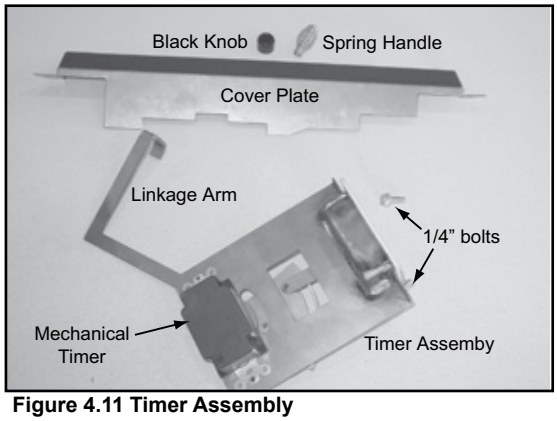


Figure 4.11 Timer Assembly

1. Remove both doors by lifting doors up and off of hinges.
2. Remove the black knob and spring handle.
3. Remove the outside air knob and then the 4 screws from each corner of fascia and remove the fascia. Place on protected surface.
4. Remove the 3 center bricks from back of fireplace and all the floor bricks**.**
5. Remove 2 Phillips head screws and pry open access door in the bottom of the fireplace with a flat head screwdriver. Figure 4.12.
6. Remove 2 screws from cover plate & pull cover plate toward you. Figures 4.13 & 4.14. Use a flat head screwdriver to pry the corner edge loose. Pry toward the fireplace and then press down and out. Figure 4.15

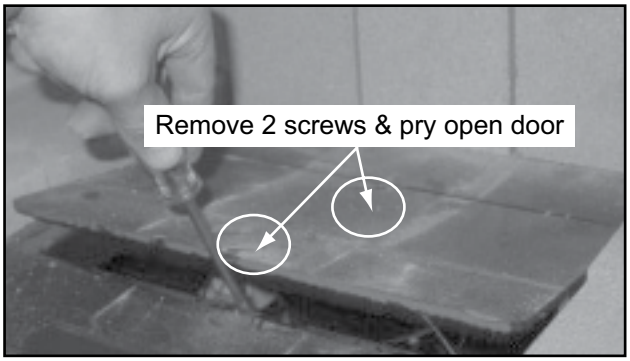


Figure 4.12

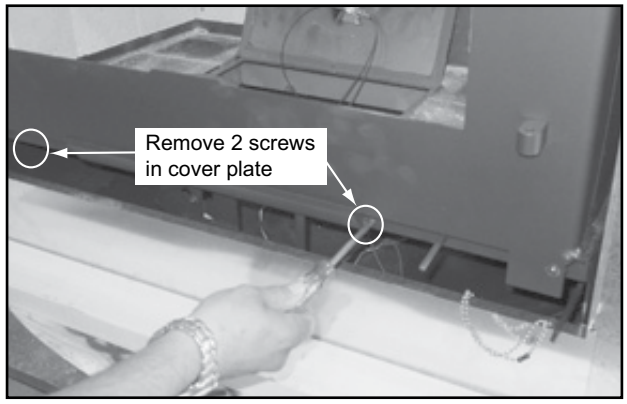


Figure 4.13

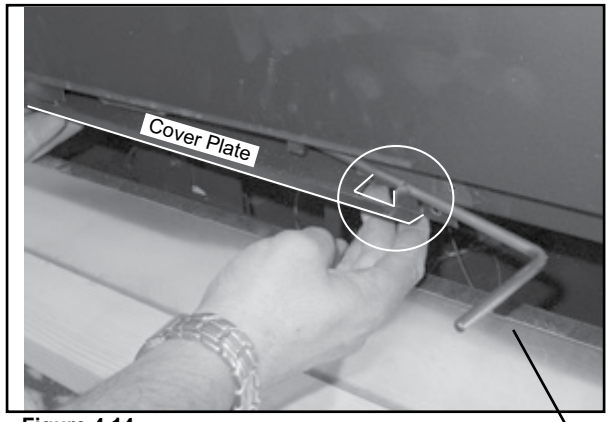


Figure 4.14

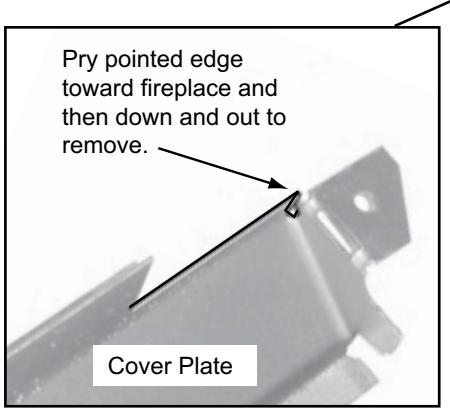


Figure 4.15

7. Move slider control rod and linkage arm to the right and out of the way. Pull rod down and out towards you. Lay the control arm down. Figures 4.16 and 4.17.
8. The timer assembly is bolted under the face. Use a 7/16 socket wrench to remove the 2 bolts. Figure 4.18.
9. There is very little room to pull the timer assembly out the front of the fireplace. Place your hand through the access door in the floor of the fireplace. Let the timer assembly drop down and then rotate it up through the access door. Figures 4.18 and 4.19.

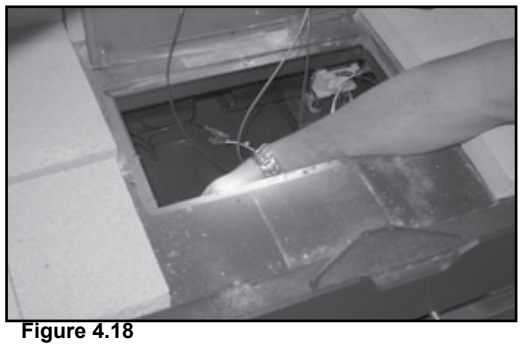


Figure 4.18

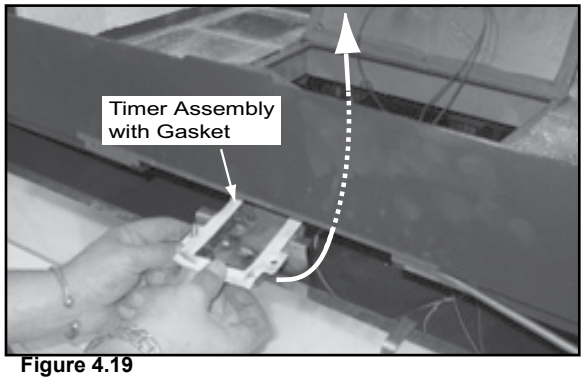


Figure 4.19

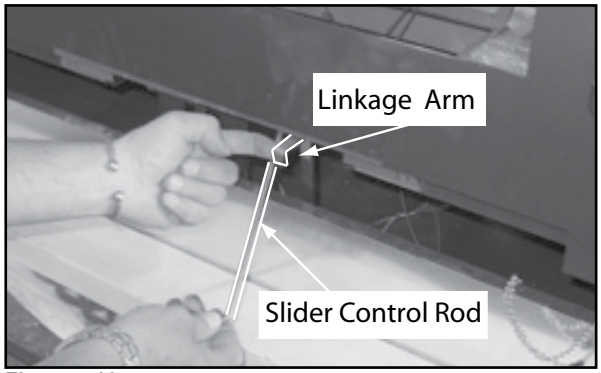


Figure 4.16

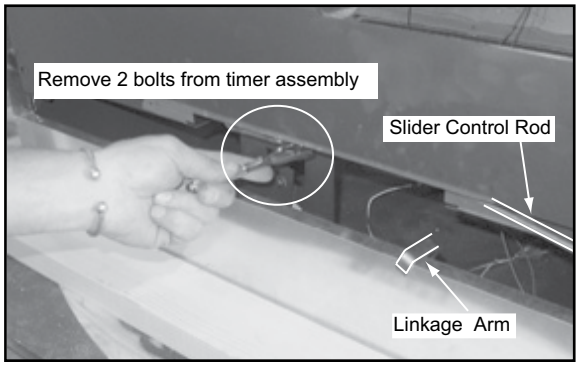


Figure 4.17

6. Timer Removal & Replacement

1. Loosen set screw on timer, remove 2 screws and remove timer. See Figure 4.20

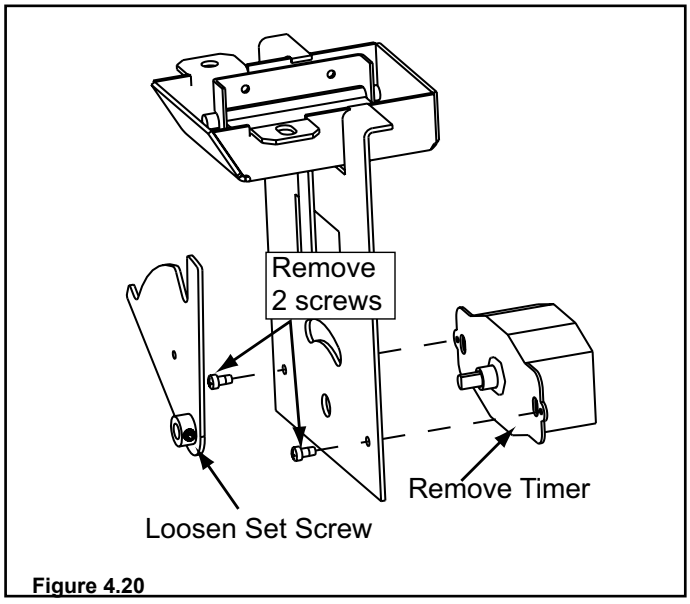


Figure 4.20

2. Install new timer using same 2 screws. It is very important that the D cut side of the timer shaft is facing the opposite side of the linkage timer arm. Figure 4.21

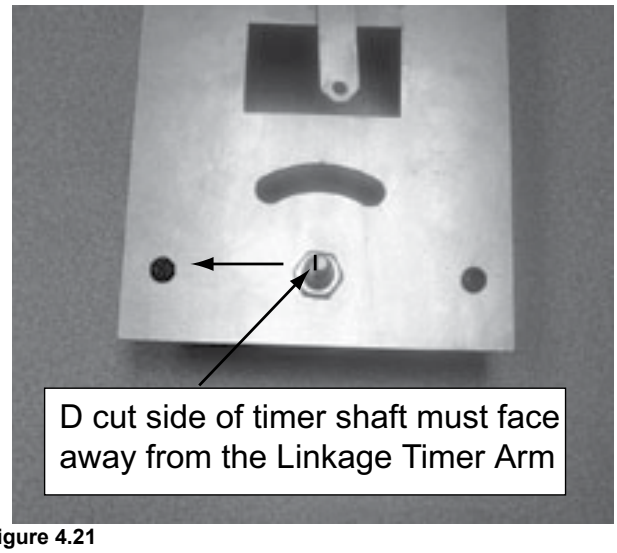


Figure 4.21

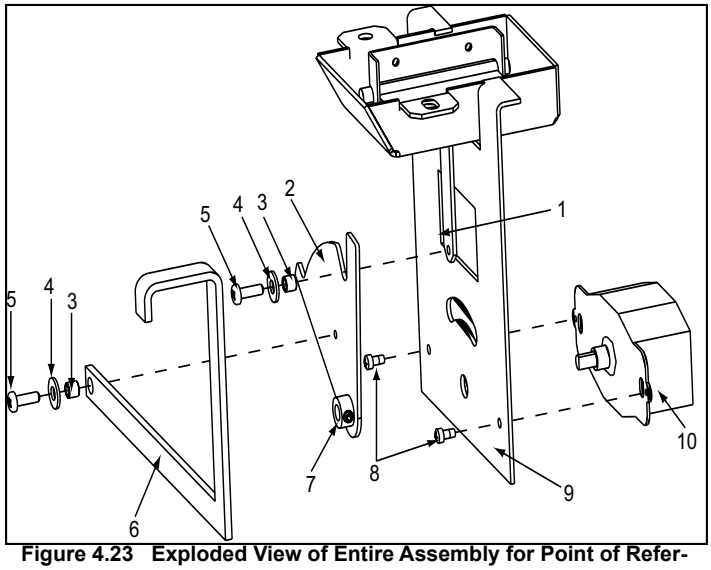


Figure 4.23 Exploded View of Entire Assembly for Point of Reference only

3. Place linkage control arm over timer shaft and tighten set screw. Figure 4.22.

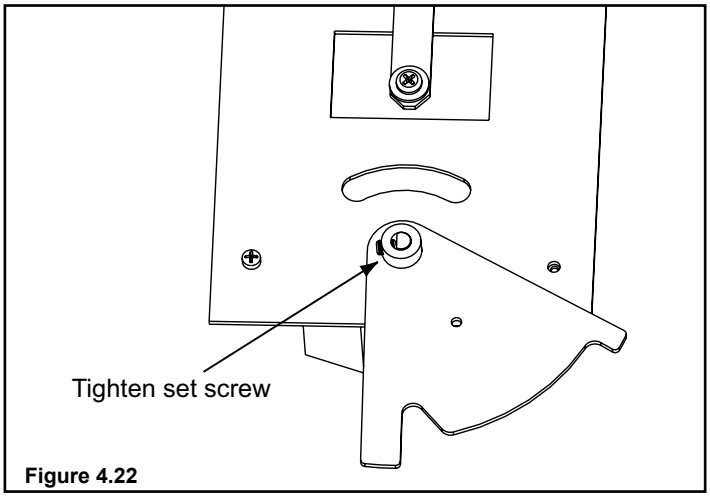


Figure 4.22

Item	Description	Qty
1	Door Linkage	1
2	Linkage Control Arm	1
3	Bushing	2
4	Washer SAE #10	2
5	Screw 8-32 x 1/2 PH PHL TC	2
6	Linkage Timer Arm	1
7	Attachment Nut & Set Screw	1
8	Screw 6-32 x 1/4 PH PHL TC	2
9	Mounting Bracket	1
10	Timer, Mechanical, 12 hours	1

4. Rotate linkage control arm into final position and re-attach to mounting plate. Note that the D cut is now facing the linkage timer arm. Re-attach the linkage timer arm. Figure 4.23.

C. Service & Maintenance Log

Date of Service	Performed By	Description of Service

A. Typical Fireplace System

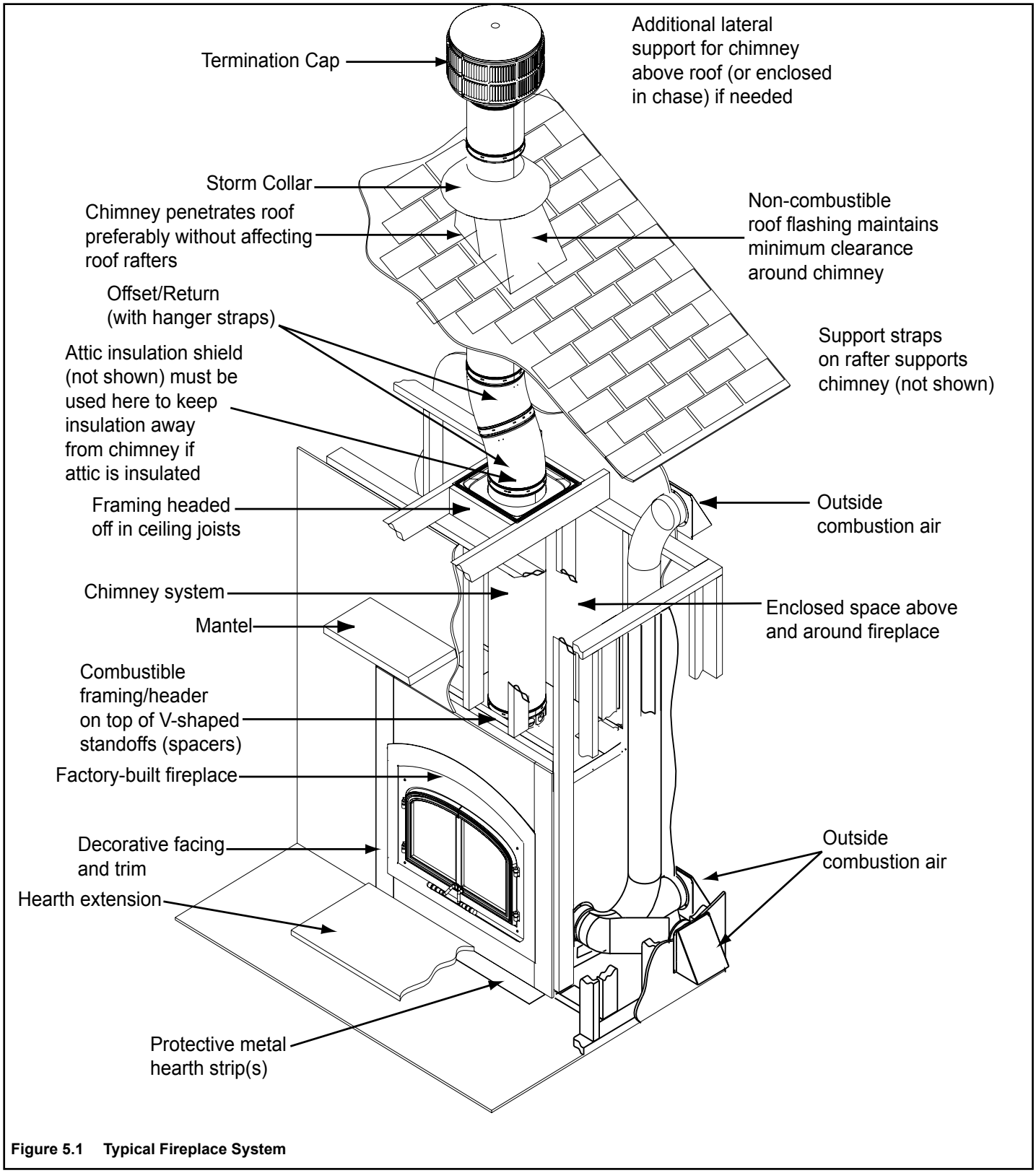

Termination Cap
Additional lateral support for chimney above roof (or enclosed in chase) if needed
Storm Collar
Chimney penetrates roof preferably without affecting roof rafters
Non-combustible roof flashing maintains minimum clearance around chimney
Offset/Return (with hanger straps)
Support straps on rafter supports chimney (not shown)
Attic insulation shield (not shown) must be used here to keep insulation away from chimney if attic is insulated
Framing headed off in ceiling joists
Outside combustion air
Chimney system
Enclosed space above and around fireplace
Mantel
Combustible framing/header on top of V-shaped standoffs (spacers)
Factory-built fireplace
Decorative facing and trim
Outside combustion air
Hearth extension
Protective metal hearth strip(s)

Figure 5.1 Typical Fireplace System

B. Design and Installation Considerations

NOTICE: *Check building codes prior to installation.*

- Installation MUST comply with local, regional, state and national codes and regulations.
- Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

Before installing, determine the following:

- Where the fireplace is to be installed
- The vent system configuration to be used
- Gas supply piping
- Electrical wiring
- Framing and finishing details
- Whether optional accessories—devices such as a fan, wall switch or remote control—are desired

NOTICE: *Junction box should be installed during initial setup to avoid major reconstruction.*

C. Draft

Draft is the pressure difference needed to vent fireplaces successfully. When a fireplace is drafting successfully, all combustion byproducts are exiting the home through the chimney.

Considerations for successful draft include:

- Preventing negative pressure
- Location of fireplace and chimney

NOTICE: *Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by:*

- *Inadequate draft due to environmental conditions*
- *Downdrafts*
- *Tight sealing construction of the structure*
- *Mechanical exhausting devices*
- *Improper location of the chimney*

D. Negative Pressure

WARNING! Risk of Asphyxiation! *Negative pressure can cause spillage of combustion fumes and soot. Fire must draft properly for safe operation.*

Negative pressure results from the imbalance of air available for the fireplace to operate properly. It can be strongest in lower levels of the house.

Causes include:

- Exhaust fans (kitchen, bath, etc.)
- Range hoods
- Combustion air requirements for furnaces, water heaters and other combustion appliances
- Clothes dryers
- Location of return-air vents to furnace or air conditioning
- Imbalances of the HVAC air handling system
- Upper level air leaks such as:
  - Recessed lighting
  - Attic hatch
  - Duct leaks

To minimize the effects of negative air pressure:

- Install the outside air kit with the intake facing prevailing winds during the heating season
- Ensure adequate outdoor air for all combustion appliances and exhaust equipment
- Ensure furnace and air conditioning return vents are not located in the immediate vicinity of the fireplace
- Avoid installing the fireplace near doors, walkways or small isolated spaces
- Recessed lighting should be a “sealed can” design
- Attic hatches weather stripped or sealed
- Attic mounted duct work and air handler joints and seams taped or sealed
- Basement installations should be avoided

NOTICE: *Hearth & Home Technologies Inc. recommends the use of direct vent fireplaces in basements.*

E. Locating Fireplace & Chimney

Location of the fireplace and chimney will affect performance.

- Install within the warm airspace enclosed by the building envelope. This helps to produce more draft, especially during lighting and die-down of the fire.
- Penetrate the highest part of the roof. This minimizes the effects of wind loading.
- Locate termination cap away from trees, adjacent structures, uneven roof lines and other obstructions.
- Minimize the use of chimney offsets.
- Consider the fireplace location relative to floor and ceiling and attic joists.
- Take into consideration the termination requirements in Section 8 and Section 9.

NOTICE: *Locating the fireplace in a basement or in a location of considerable air movement can cause intermittent smoke spillage from fireplace. Do not locate fireplace near*

- *frequently open doors*
- *central heat outlets or returns*

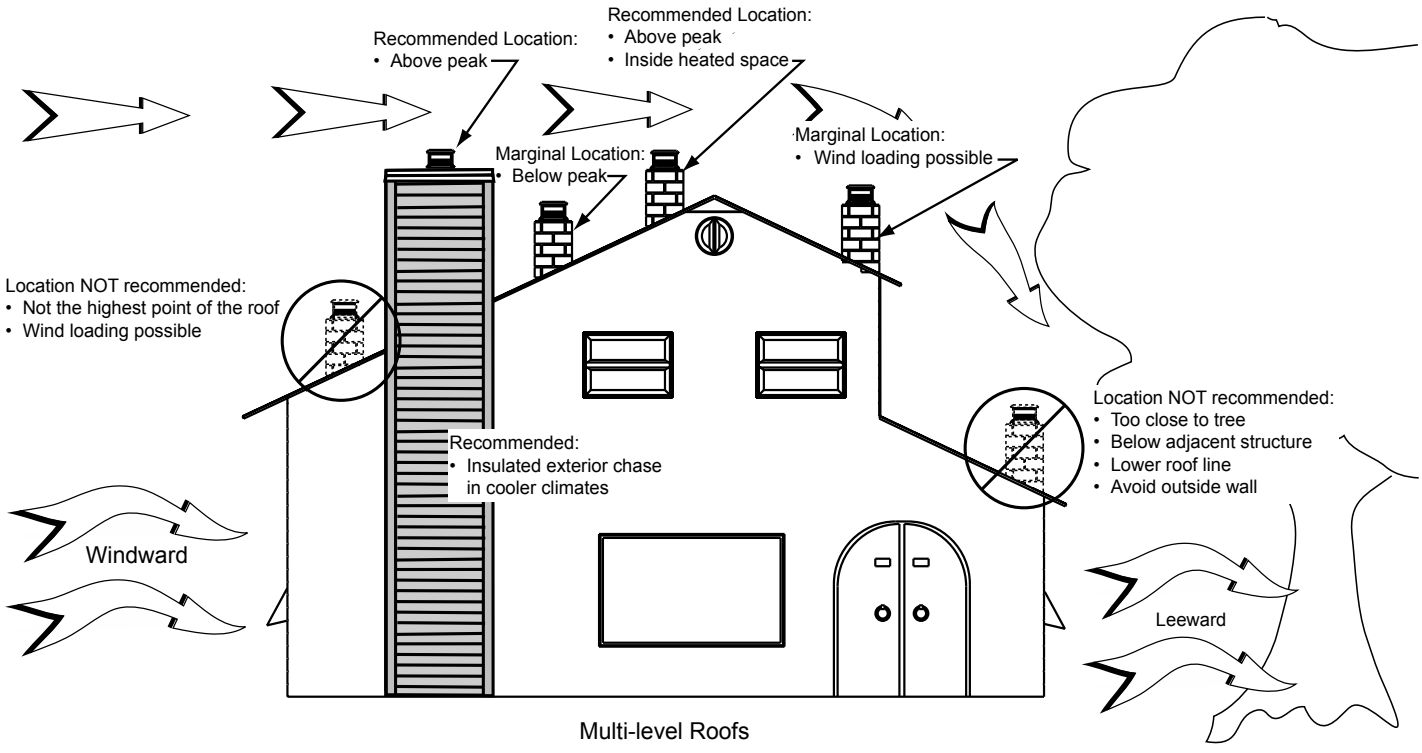


Figure 5.2 Recommended Chimney Locations

F. Tools and Supplies Needed

Before beginning the installation be sure the following tools and building supplies are available:

Reciprocating saw	Framing material
Pliers	Non-combustible sealant
Hammer	Gloves
Phillips screwdriver	Framing square
Flat blade screwdriver	Electric drill and bits
Plumb line	Safety glasses
Level	Tape measure

1/2-3/4 in. length, #6 or #8 self-drilling screws

Misc. screws and nails

G. Fireplace System Requirements

The Heatilator fireplace system consists of the following:

- Fireplace
- Firebrick
- Chimney termination cap
- Chimney system
- Hearth extension
- Outside air

Required components include:

- Chimney Air Kit (with SL 300 Series Pipe)

Optional components include:

- Firescreen
- Lintel Bar
- Heat Zone Kit
- Top Vent Kit

H. Inspect Fireplace and Components

WARNING! Risk of Fire and/or Explosion! *Damaged parts could impair safe operation.* ***DO NOT*** *install damaged, incomplete or substitute components. Keep fireplace dry.*

- Remove fireplace and components from packaging and inspect for damage.
- Vent system components and doors are shipped in separate packages.
- Report to your dealer any parts damaged in shipment.
- **Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

6 Framing & Clearances

A. Selecting Fireplace Locations

Several options are available to you when choosing a location for your fireplace. This fireplace may be used as a room divider, installed along a wall, across a corner or used in an exterior chase. See Figure 6.1

Locating the fireplace in a basement, near frequently opened doors, central heat outlets or returns, or other locations of considerable air movement can affect the performance and cause intermittent smoke spillage from the front of the fireplace when no outside air is used. Outside air must be used for combustion. The Constitution comes equipped with an outside air inlet to feed combustion air from outside the home, along with an outside air termination cap. Consideration should be given to these factors before deciding on a location. See Sections 4 and 5.

NOTICE: *In addition to these framing dimensions, also reference the following sections*

- *Clearances (Section 6.B)*

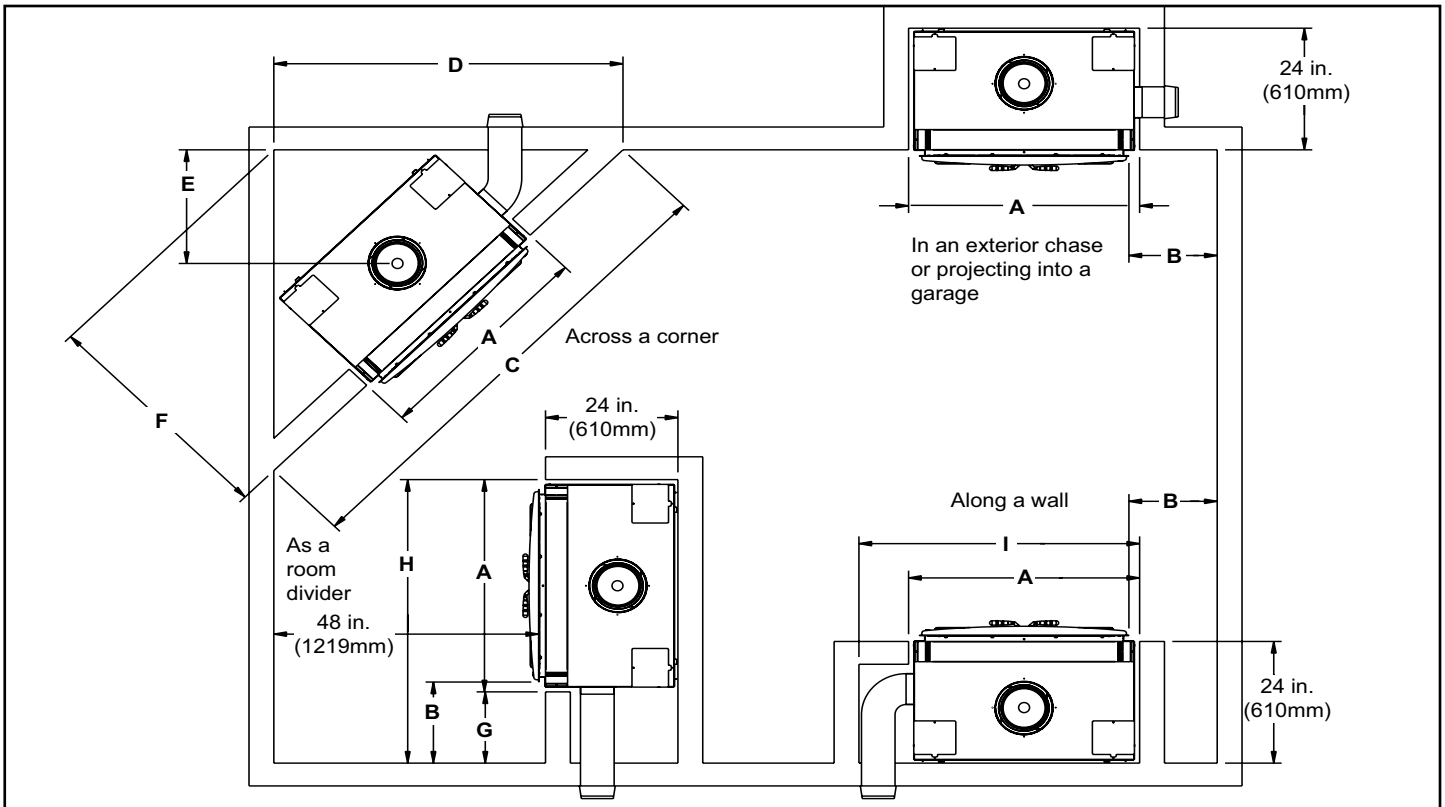
NOTICE:

- *Illustrations and photos reflect typical installations and are FOR DESIGN PURPOSES ONLY.*
- *Illustrations/diagrams are not drawn to scale.*
- *Actual installation/appearance may vary due to individual design preference.*
- *Hearth & Home Technologies reserves the right to alter its products.*

NOTICE:

A minimum 1 in. air clearance must be maintained at the back and to the sides of the fireplace assembly.

Chimney sections at any level require a 2 in. minimum air space clearance between the framing and chimney sections.



Model: Constitution (Dimensions for finished walls)		A	B	C	D	E	F	G	H	I
	in.	41-7/8	16	89-1/2	63-5/16	22-7/16	44-3/4	14-1/16	55-15/16	50-7/8
	mm	1063	406	2273	1608	570	1137	357	1421	1292

NOTICE: ***Measurements are FRAMING dimensions only and do not include drywall either in the cavity or on the interior walls.***

Figure 6.1 Fireplace Locations

B. Clearances

WARNING! Risk of Fire! *You must comply with all minimum air space clearances to combustibles as specified in Figure 6.2.* ***DO NOT*** *pack required air spaces with insulation or other materials.Framing or finishing material used on the front of, or in front of, the appliance closer than the minimums listed.must be constucted entirely of non-combustible materials (i.e., steel studs, concrete boaed, etc.). Failure to comply may cause fire.*

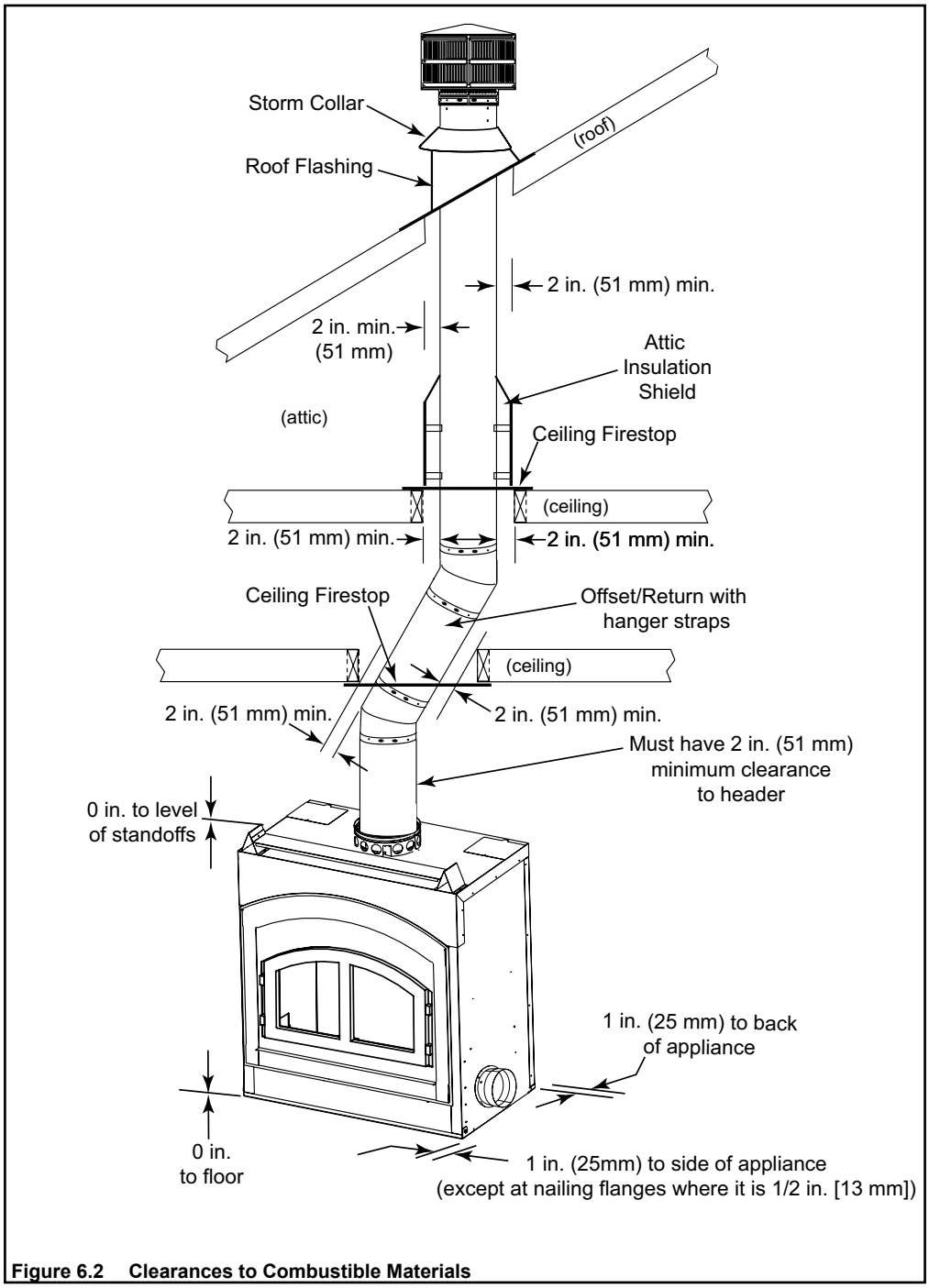


Figure 6.2 Clearances to Combustible Materials

NOTICE: Chimney air kit is not shown, but is required.

1. MINIMUM CLEARANCES TO COMBUSTIBLES

WITHIN ENCLOSURE AREA:

Appliance to backwall	1 in. (25 mm)
Appliance to sidewall	1 in. (25 mm)
Duct boots to framing	0 in. (0 mm)
Top standoffs to header	0 in. (0 mm)
Door opening to sidewall	22-7/8 in. (581 mm)

EXPOSED SURFACES

Faceplate to sidewall	16 in. (406 mm)
Heat zone air grills to ceiling	12 in. (305 mm)

MANTEL

Combustible and non-combustible mantel minimum height from base of fireplace to underside of mantel	60 in. (1524 mm)
Maximum mantel depth	12 in. (305 mm)

2. REDUCED MANTEL HEIGHT / OPTIONAL FRAMING CONSTRUCTION REQUIRED:

Non-combustible mantel material minimum height from base of fireplace to underside of mantel 46 in. (1168mm) when the following enclosure construction materials are used:

Non-combustible framing materials must be used above fireplace to height of 84 in. (2134mm) from base of fireplace for all construction materials, framing members, sheeting, and all finish materials.

3. NON-COMBUSTIBLE MATERIALS

Materials which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing ASTM E 136, Standard Test Method for Behavior of Materials, in a Vertical Tube Furnace at 750°C, shall be considered non-combustible materials.

4. COMBUSTIBLE MATERIALS

Materials made of (or surfaced with) wood, compressed paper, plant fibers, plastics, or other materials that can ignite and burn, whether flame proofed or not, or whether plastered or un-plastered shall be considered combustible materials.

Warning Fire Risk!
Hearth & Home Technologies is not responsible for discoloration, cracking or other material failures of finished materials due to heat exposure or smoke.
Choose finishing materials carefully.

Warning Fire Risk!
Non-combustbile mantels installed at a reduced height may GET EXTREMELY HOT during use of the fireplace.
DO NOT TOUCH or place heat sensitive combustible items on the mantel

5. CHIMNEY SECTIONS

Chimney sections at any level require a 2 in. (51 mm) minimum air space clearance between the framing and chimney section.

C. Frame the Fireplace

NOTICE: Wiring for fans must be done before framed enclosure is completed. If using a Heat Zone kit, it also must be installed before enclosure is complete.

The Constitution Fireplace will fit a framed opening height of 43-7/8 in. (1114 mm) tall and width of 42 in. (1067 mm). The finished cavity depth must be no less than 24 in. (610 mm). Framing must extend straight up all the way to the ceiling.

Figure 6.3 shows a typical framing (using 2 x 4 lumber) of the fireplace, assuming combustible materials are used. All required clearances to combustibles around the fireplace must be adhered to. See Figure 6.2 on page 36. Any framing across the top of the fireplace must be above the level of the top standoffs. (No recess above standoffs.)

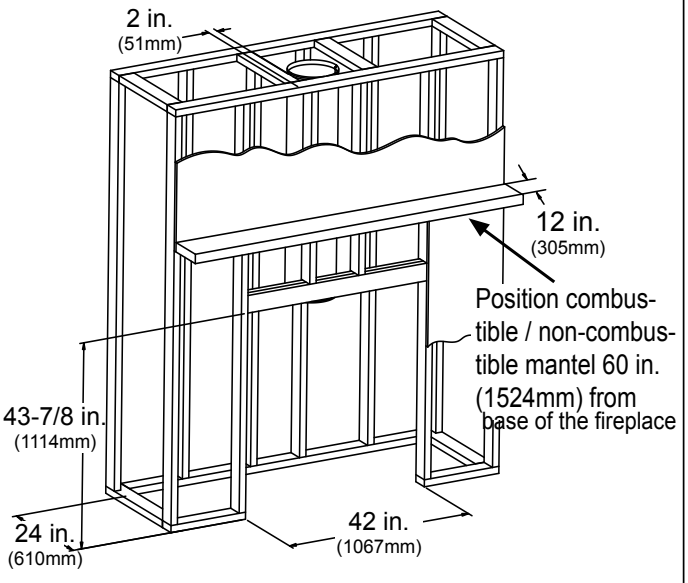


Figure 6.3 Framing the Fireplace

D. Electrical Access and Wiring Diagram

NOTICE: *The manual override switch, rheostat speed control and cover plate are supplied. You will need to supply: 14-3 wire with ground; 14-2 wire with ground; standard wall mount junction box; wire nuts.*

1. Remove junction box cover plate on the bottom right side of the fireplace.
2. Thread the 14-3 with ground wire through the opening with the strain relief on the cover plate.
3. Match colors to wire harness, (red to red, white to white, etc) and secure with wire nuts.

NOTICE: *Wiring for fans must be done before framed enclosure is completed. If using a Heat Zone kit, it also must be installed before enclosure is complete.*

WARNING! Fire Risk!

Do not apply combustible finishing materials over any part of the front of this fireplace.

- *The metal fireplace face may only be covered with noncombustible materials such as ceramic tile, brick, or stone.*
- *Do not cover or block any cooling air slots.*

The decorative fascia must be removable for future serviceability of the Automatic Combustion Control.

- Maintain clearances.
- Use only non-combustible material below standoffs, material such as cement board is acceptable.
- Framing or finishing material used on the front of, or in front of, the appliance closer than the minimums listed, must be constructed entirely of noncombustible materials (i.e., steel studs, concrete board, etc.).

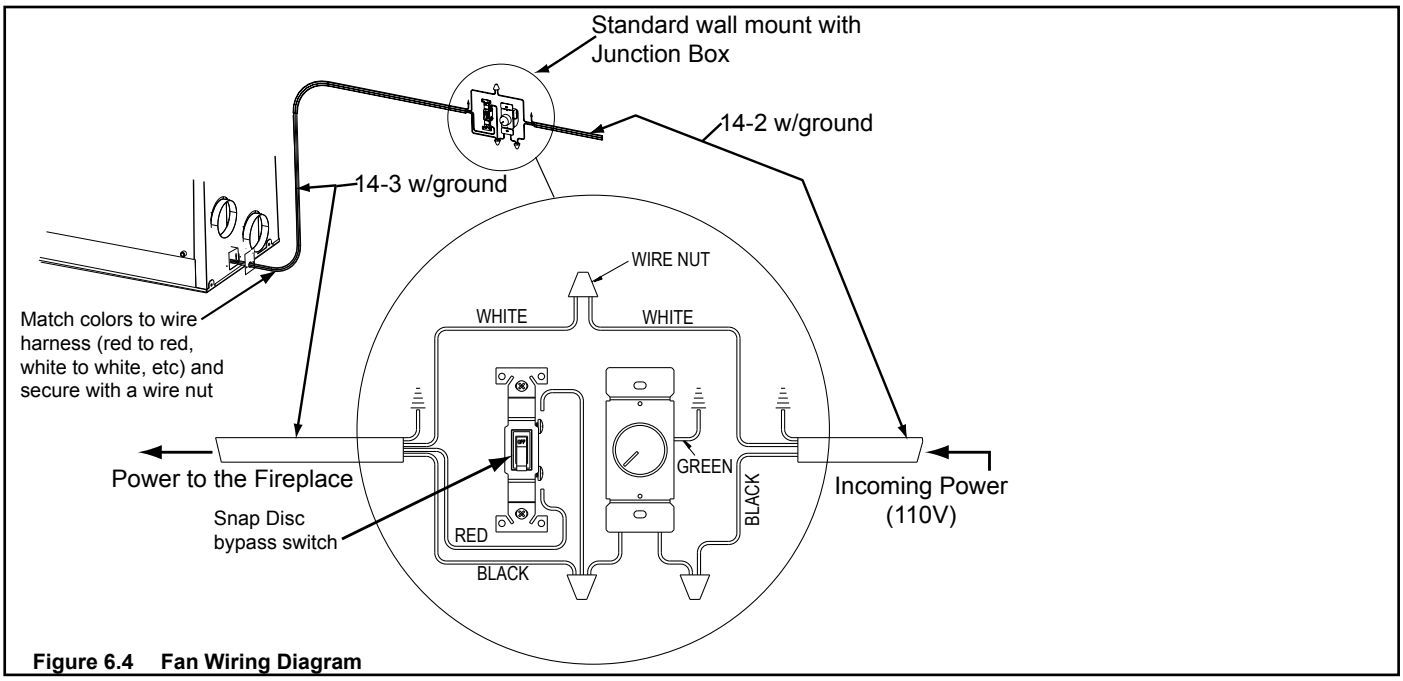


Figure 6.4 Fan Wiring Diagram

WARNING! Risk of Fire! *You must comply with all minimum air space clearances to combustibles.* ***DO NOT*** *pack required air spaces with insulation or other materials.*

WARNING! Fire Risk!

Comply with all minimum clearances specified.

- *A minimum 1 in. (13mm) air clearance must be maintained at the back and 1 in. (25mm) to the sides of the fireplace assembly.*
- *Chimney sections at any level require a 2 in. (51mm) minimum air space clearance between the framing and chimney section.*

7 Installation of Fireplace

CAUTION! Risk of Cuts/Abrasions. *Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.*

A. Install the Outside Air Kit

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. See Section 6.

An outside air kit must be used for combustion to minimize the effects of negative pressure within the structure. We recommend you utilize the shortest duct run to optimize the performance of the outside air kit. The outside air kit inlet should be positioned in a manner that will not allow snow, leaves, etc. to block the inlet. In some installations the air duct may need to be run vertically. In such an installation, a 3 ft (914 mm) height difference must be maintained from the top of the uppermost chimney section to the outside combustion air inlet. See Figure 7.2 on page 40.

See Figure 7.1 for proper placement of outside air inlet.

The outside air kit is installed on the right hand side of the fireplace. See Figure 7.3 for handle location/operation.

1. Cut a 6 in. (152 mm) hole in outside wall to accommodate air piping. See Figure 7.3 on page 40.
2. Use 6 in. (152 mm) metal flex or rigid piping *(not supplied)* to directly connect outside air to fireplace intake. Insulate the pipe to prevent frost condensation.
3. Use the supplied termination cap.
4. Seal between the wall and the pipe with silicone to prevent moisture penetration and air leaks.
5. Seal between the termination cap and the house with silicone to prevent air infiltration.

NOTE: A control knob allows you control of the outside air inlet. Use of outside air for combustion is required to conserve heated air within the structure and to provide make up air to keep the fireplace venting properly.

IMPORTANT! Outside air control considerations

Turn counter-clockwise to "OPEN" positions

Outside air knob must be in the "OPEN" position to operate fireplace properly.

May be closed when not in use to prevent cold air infiltration

CAUTION! Risk of Fire or Asphyxiation! DO NOT *draw outside combustion air from wall, floor or ceiling cavity, or enclosed spaces such as an attic or garage.*

- ***DO NOT*** *place outside air hood close to exhaust vents or chimneys. Fumes or odor could be drawn into the room through the fireplace.*
- *Locate outside air inlet to prevent blockage from leaves, snow/ice, or other debris. Blockages could cause combustion air starvation.*

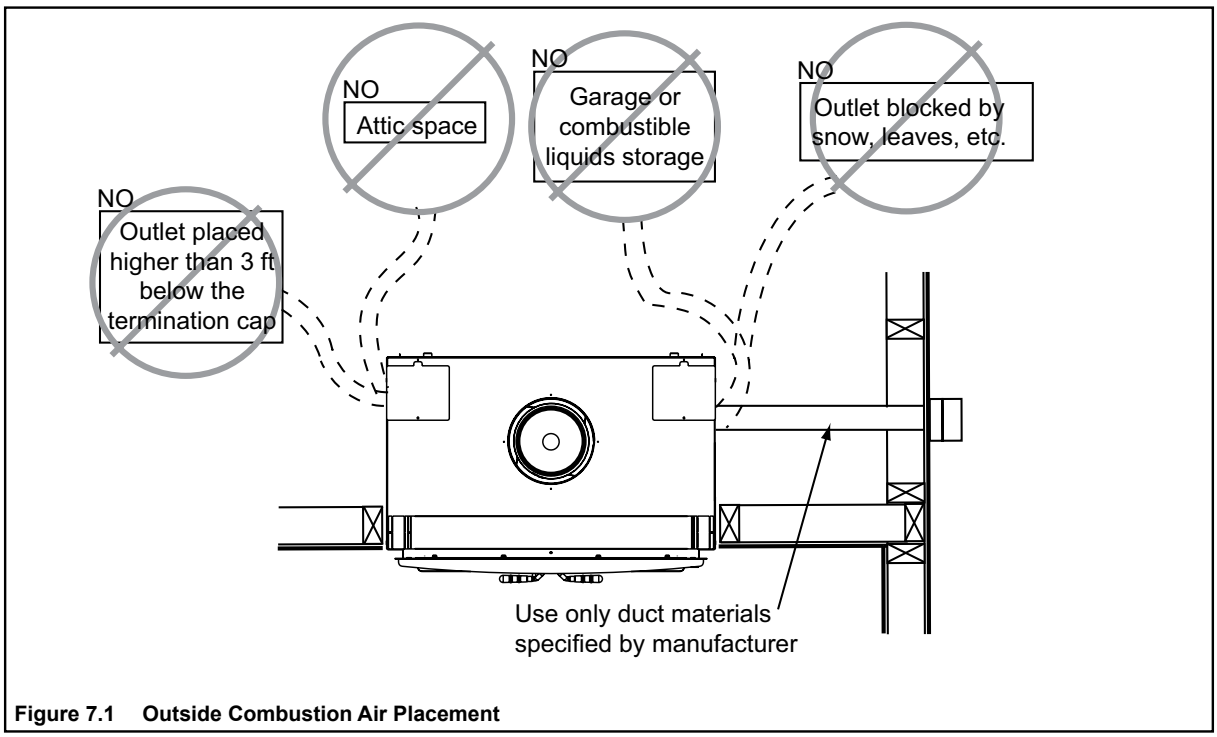
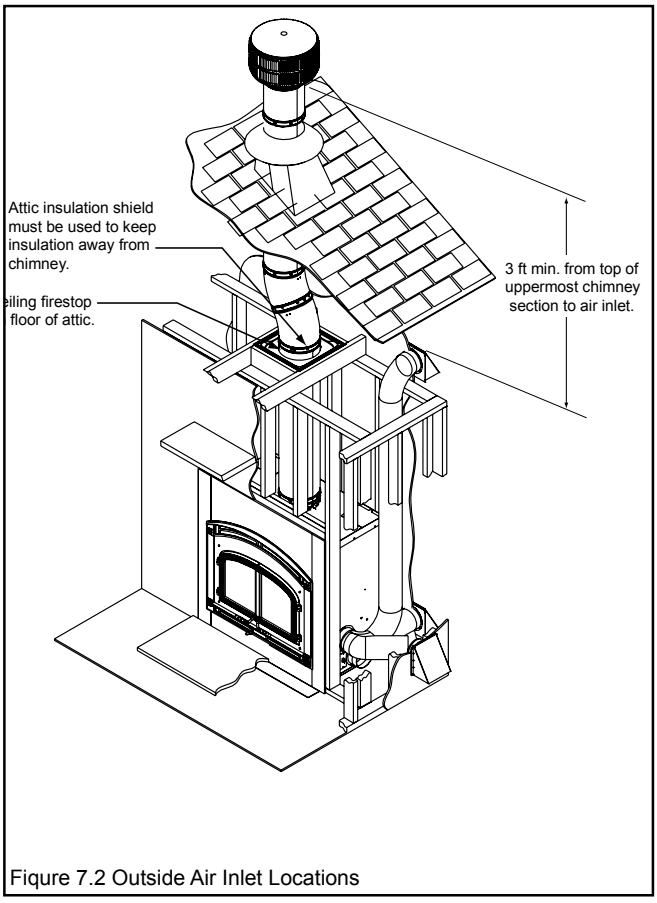


Figure 7.1 Outside Combustion Air Placement



Fiqure 7.2 Outside Air Inlet Locations

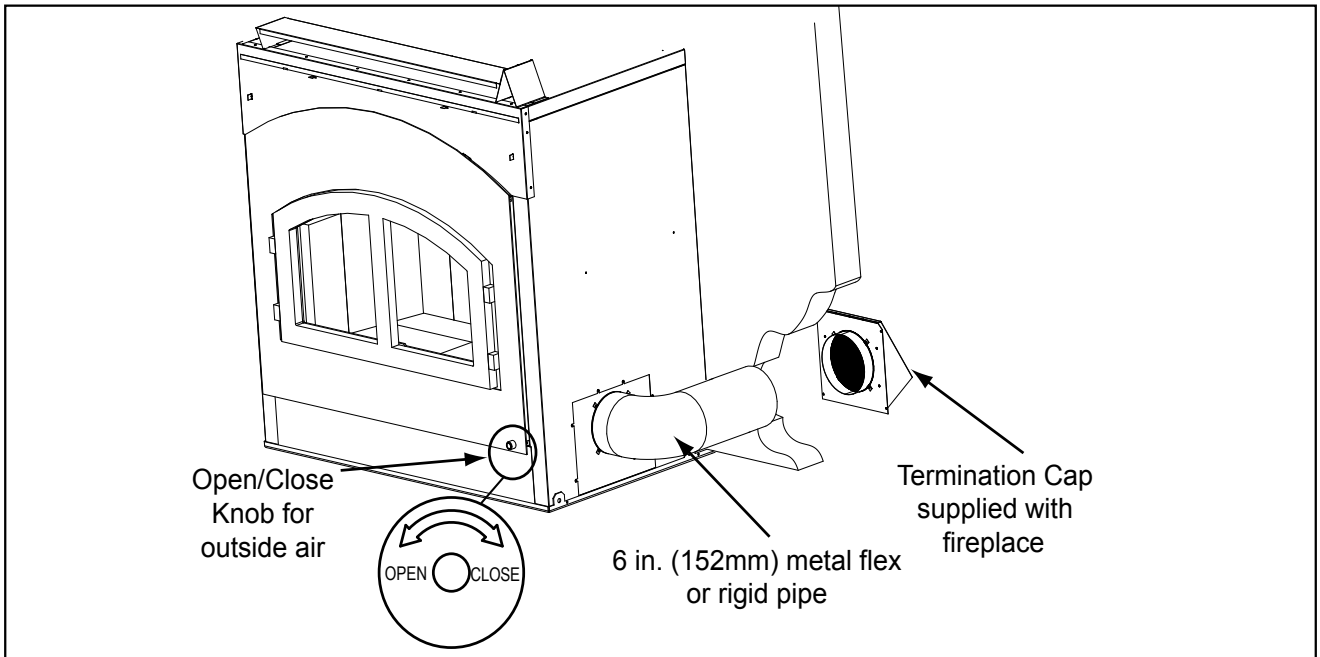


Figure 7.3 Outside Combustion Air Handle Location

B. Secure the Fireplace

- **Position the Fireplace**

  This fireplace may be placed on either a combustible or noncombustible continuous flat surface. Follow the instructions for framing in Section 6.C. Slide the fireplace into position. Be sure to provide the minimum 1 in. air clearance at the sides and at back of the fireplace assembly. See Section 6.B.

CAUTION! Risk of Cuts/Abrasions. *Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.*

WARNING! Risk of Fire! *Prevent contact with sagging, loose insulation.*

- ***DO NOT*** *install against vapor barriers or exposed insulation.*
- *Secure insulation and vapor barriers.*
- *Provide minimum air space clearances at the sides and back of the fireplace assembly as outlined in Section.*

WARNING! Risk of Fire! *Protective metal hearth strips MUST be installed on combustible surfaces.* ***DO NOT*** *cover metal strips with combustible materials. Sparks or embers may ignite flooring.*

C. Place Protective Metal Hearth Strips

- Refer to Figures 7.4 and 7.5.
- Locate the two protective metal hearth strips measuring approximately 26 in. x 4 in. (660 mm x 102 mm) included with this fireplace.
- Slide each metal strip 2 in. (51 mm) under front edge of fireplace.
- Overlap strips in the middle of fireplace opening by 1 in. (25 mm) minimum..
- Metal strips must extend beyond the front and sides of the fireplace opening by at least 2 in. (51 mm).
- Protect the front of a platform elevated above the hearth extension with metal strips (not included with fireplace) per Figure 7.5. See Section 10C for hearth extension instructions.

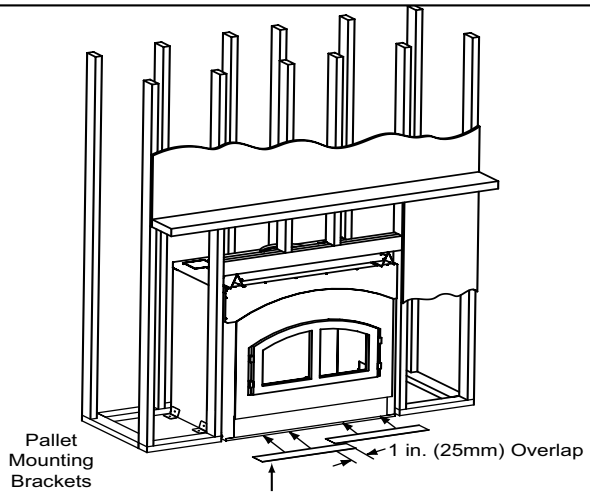

Pallet
Mounting
Brackets
1 in. (25mm) Overlap
Protective metal strips are placed 2 in.(51mm) under the front of the fireplace and must extend beyond the front and sides of fireplace opening by 2 in. (51mm). Nail or screw metal strips in place.

Figure 7.4 Position the Protective Metal Hearth Strips

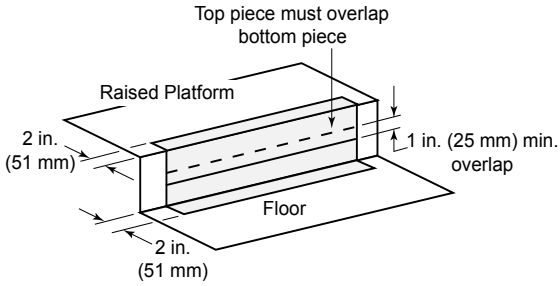


Figure 7.5 Protect the Front of an Elevated Platform

8 Chimney Assembly

NOTICE: *Chimney performance may vary.*

- *Trees, buildings, roof lines and wind conditions affect performance.*
- *Chimney height may need adjustment if smoking or overdraft occurs.*

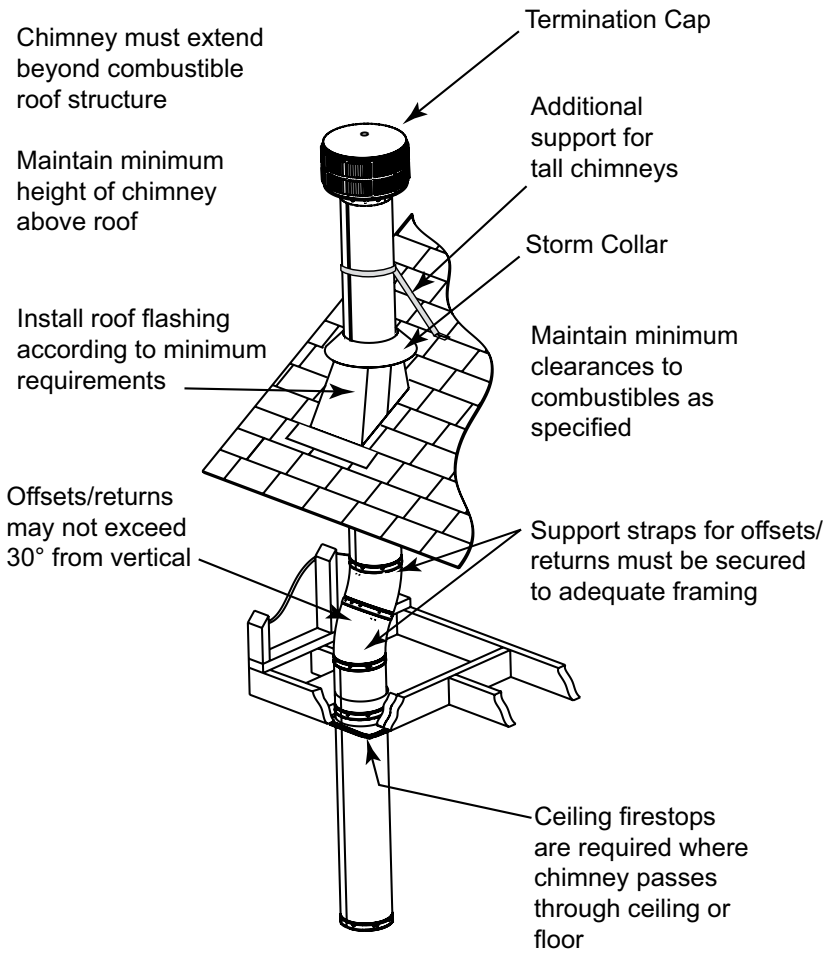

Chimney must extend beyond combustible roof structure
Maintain minimum height of chimney above roof
Install roof flashing according to minimum requirements
Offsets/returns may not exceed 30° from vertical
Termination Cap
Additional support for tall chimneys
Storm Collar
Maintain minimum clearances to combustibles as specified
Support straps for offsets/ returns must be secured to adequate framing
Ceiling firestops are required where chimney passes through ceiling or floor

Figure 8.1 Typical Chimney System - Guidelines for Chimney System Installation

A. Chimney Requirements

Vertical distances are measured from the base of the fireplace as shown in Figure 8.2

Minimum overall straight height	13 ft	3.96 m
Minimum height with single offset/ return	14.5 ft	4.42 m
Double offset/return minimum height	20 ft	6.1 m
Maximum height	50 ft	15.24 m
Maximum chimney length between an offset and return	20 ft	6.1 m
Maximum distance between chimney stabilizers	35 ft	10.67 m
Maximum unsupported chimney length between the offset and return	6 ft	1.83 m
Maximum unsupported chimney height above the fireplace	35 ft	10.67 m
Maximum unsupported chimney above roof	6 ft	1.83 m

NOTICE: *A maximum of two pairs of offsets and returns may be used.*

WARNING! Risk of Fire! *You must maintain 2 in. (51 mm) air space clearance to insulation and other combustible materials around the chimney system. Failure to do so may cause overheating and fire.*

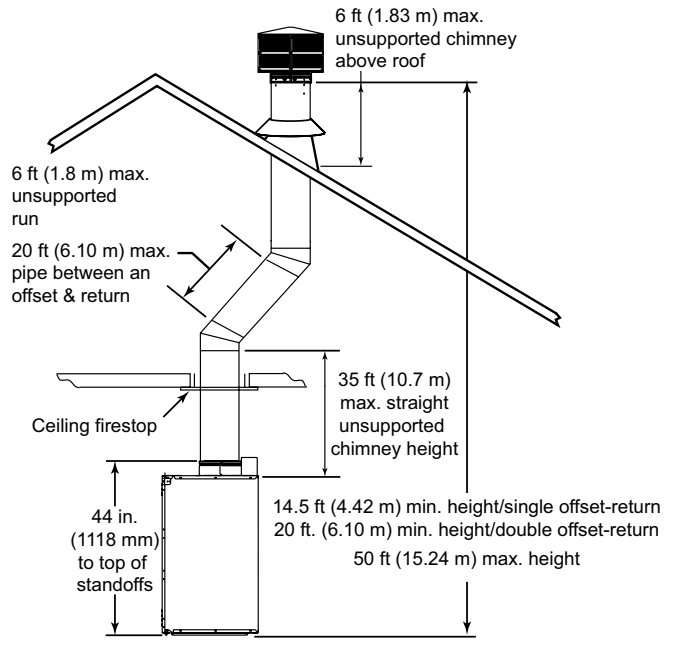


Figure 8.2 Chimney Requirements

NOTICE*: You must provide support for the pipe during construction and check to be sure inadvertent loading has not dislodged the chimney section from the fireplace or at any chimney joint.*

B. Chimney Termination Requirements

To determine the chimney components needed to complete your particular installation, follow the steps below:

- Determine the total vertical height of the fireplace installation. This dimension is measured from the base of the fireplace assembly to the point where the smoke exits the termination cap.
- Subtract the effective height of the fireplace assembly from the overall height of the fireplace installation (measured from the base of the fireplace to the bottom of the termination cap, 13 ft. (4m).
- Refer to Table 8.1 to determine what components must be selected to complete the fireplace installation.
- Determine the number of ceiling firestops, stabilizers, roof flashing, etc. required to complete the fireplace installation.

Table 8.1

HEIGHT OF CHIMNEY COMPONENTS		*in.*	*mm*
Chimney Stabilizer			
	SL3	4-3/4	121
Ceiling Firestops			
	FS338	0	0
	FS339	0	0
	FS340	0	0
Offsets/Returns			
	SL315	13-3/8	340
	SL330	15-1/2	394
Roof Flashing			
	RF370	0	0
	RF371	0	0
Chimney Sections*			
	SL306	4-3/4	121
	SL312	10-3/4	273
	SL318	16-3/4	425
	SL324	22-3/4	578
	SL336	34-3/4	883
	SL348	46-3/4	1187

*** Dimensions reflect effective height.**

CAUTION! Risk of Fire and/or Asphyxiation! DO NOT *connect this fireplace to a chimney flue servicing another appliance.* ***DO NOT*** *connect to any air distribution duct or system. These actions could cause overheating/fire in the chimney flue, or release of exhaust fumes into the living areas.*

C. Using Offsets/ Returns

- Use an offset/return to bypass overhead obstructions.
- An offset and return can be used as a single entity or separated by chimney section(s).

WARNING! Risk of Fire! DO NOT *use offset/returns greater than 30°. Chimney draft will be restricted and could cause overheating and fire. Secure offsets vwith screws (not to exceed 1/2" / 13 mm in length) Secure returns with strapping. Straight chimney sections may be secured with screws. Keep chimney sections from separating or twisting.*

- ***MEASURE THE SHIFT NEEDED TO AVOID THE OVERHEAD OBSTRUCTION. Refer to dimension A in Figure 8.3.***
- Find the appropriate A dimension listed in Table 8.2. The B dimension coinciding with the A dimension measurement in Table 8.2 represents the required vertical clearance needed to complete the offset/return.
- Read across the chart to find the number of chimney sections/model numbers needed between the offset and return.

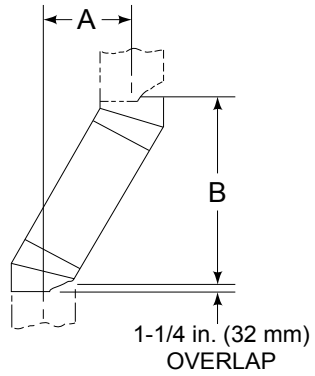


Figure 8.3 Chimney Offset/Return

Example:

Your "A" dimension from Figure 8.3 is 14 1/2 in. (368 mm). Using Table 8.2 the dimension closest to, but not less than 14 1/2 in. (368 mm) is 14 1/2 in. (368 mm) using a 30° offset/return.

You determine from the table that you need 34 1/8 in. (867 mm) (Dimension "B") between the offset and return.

The chimney component that best fits your application is one SL324.

Table 8.2

15-degree										30-degree			
A Offset		B Height								A Offset		B Height	
in.	*mm*	*in.*	*mm*	SL306	SL312	SL318	SL324	SL336	SL348	*in.*	*mm*	*in.*	*mm*
1-5/8	41	13-3/8	340	-	-	-	-	-	-	3-5/8	92	15-1/2	394
2-7/8	73	17-3/4	451	1	-	-	-	-	-	5-1/2	140	18-5/8	473
4-1/8	102	22-3/8	568	2	-	-	-	-	-	7-1/4	184	21-3/4	552
4-1/2	114	23-5/8	600	-	1	-	-	-	-	8-1/2	216	23-3/4	603
5-3/4	146	28-1/4	718	1	1	-	-	-	-	10-1/4	260	27	686
6	152	29-3/8	746	-	-	1	-	-	-	11-1/2	292	29	737
7-1/4	184	34	864	-	2	-	-	-	-	13-1/4	337	32-1/8	816
7-3/4	197	36-1/8	918	-	-	-	1	-	-	14-1/2	368	34-1/8	867
8-3/4	222	39-3/4	1010	1	-	-	1	-	-	16-1/4	413	37-3/8	949
10-3/8	264	45-5/8	1159	-	-	2	-	-	-	19-1/4	489	42-1/2	1080
10-5/8	270	46-3/4	1187	-	-	-	-	1	-	20-1/2	521	44-5/8	1133
11-7/8	302	51-3/8	1305	1	-	-	-	1	-	22-1/4	565	47-3/4	1213
13-1/2	243	57-1/4	1454	-	-	-	2	-	-	25-1/4	641	52-7/8	1343
13-3/4	349	58-3/8	1483	-	-	-	-	-	1	26-1/2	673	55	1397
15	381	63	1600	1	-	-	-	-	1	28-1/4	718	58-1/8	1476
16-1/2	419	68-3/4	1746	-	1	-	-	-	1	31-1/4	794	63-1/4	1607
18	457	74-5/8	1895	-	-	1	-	-	1	34-1/4	870	68-1/2	1740
19-5/8	498	80-3/8	2042	-	-	-	1	-	1	37-1/4	946	73-3/4	1873
20-5/8	524	84-1/8	2137	1	-	-	1	-	1	39-1/8	994	76-7/8	1953
22-3/4	578	91-7/8	2334	-	-	-	-	1	1	43-1/4	1099	84-1/8	2137
24	610	96-1/2	2451	1	-	-	-	1	1	45-1/8	1146	87-1/4	2216
25-7/8	657	103-1/2	2629	-	-	-	-	-	2	49-1/4	1251	94-1/2	2400

Proper assembly of air-cooled chimney parts result in an overlap at chimney joints of 1-1/4 in. (32 mm). Effective length is built into this chart.

D. Assemble the Chimney Sections

Use only those components described in this manual. Substitute or damaged chimney components could impair safe operation and cause overheating and fire.

Attach either a straight chimney section or an offset to the top of the fireplace (depending on your installation requirement). Chimney sections are locked together by pushing downward until the top section meets the stop bead on the lower section.

The inner flue is placed to the inside of the flue section below it. The outer casing is placed outside the outer casing of the chimney section below it. See Figure 8.4.

NOTICE: *Chimney sections cannot be disassembled once locked together. Plan ahead!*

- Lock chimney sections and/or offsets/returns together by pushing downward until the top section meets the stop bead on the lower section.
- Pull on the top section to make sure it is fully engaged and will not separate.
- You may use #6 or #8 sheet metal screws no longer than 1/2 in. (13 mm) to fasten chimney sections together. Do NOT penetrate inner flue.

WARNING! Risk of Fire! *You MUST use screws (provided) to fasten offset/returns to chimney sections to keep the chimney parts from twisting. Failure to do so could cause fire.*

- Fasten offset/returns to chimney sections. Insert the screws (provided) through the predrilled holes. Do NOT penetrate inner flue.
- Secure chimney returns with hanger straps provided; fasten to studs or joists.
- Vertical straight runs of chimney must be supported every 35 ft (10.7 m).

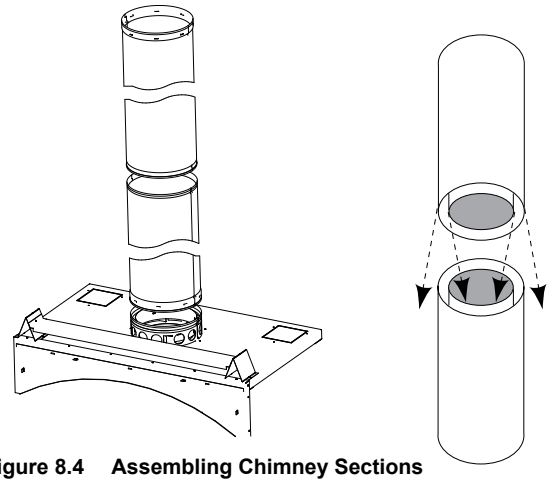


Figure 8.4 Assembling Chimney Sections

WARNING! Risk of Fire! DO NOT *install substitute or damaged chimney components.*

E. Installing CAK4A and Flex Pipe

NOTICE: *Chimney Air Kit, Part CAK4A is REQUIRED when using the SL-300 Pipe Series. Detailed instructions are supplied with the kit.*

1. Install the chimney pipe first.
2. Hand bend the tabs in position before placing on the fireplace.
3. Place the box on top of the fireplace around the chimney pipe, push both pieces together and secure with screws provided.
4. Use the pre-punched holes in the tabs as guides and drill holes through the fireplace top.
5. Secure the CAK4A in place.
6. Seal around the kit at the flue and at the top of the can with caulk.

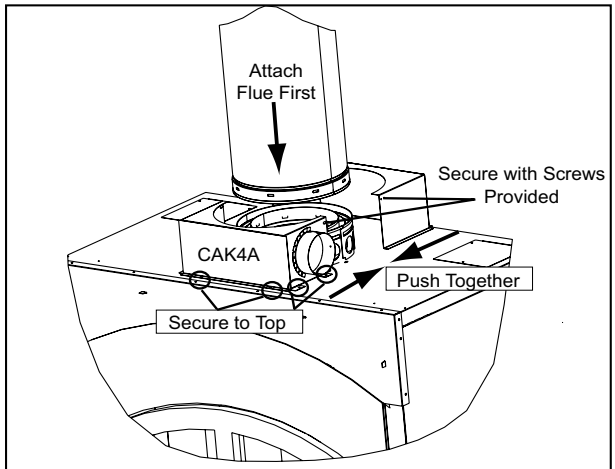


Figure 8.5 Installing the CAK4A

NOTES:

1. The outside termination cap must be a minimum of 6 ft (1829 mm) above the ground and kept free of debris.
2. If the CAK4A is installed in a chase, the CAK4A side termination cap must be at least 3 ft (914 mm) below the chimney top.
3. Seal around the cap and flex with caulk to stop air from getting in to the chase (See Figures 9.4-9.8 on page 52).

WARNING! Fire Risk!
The flex hose must never be compressed or deformed!

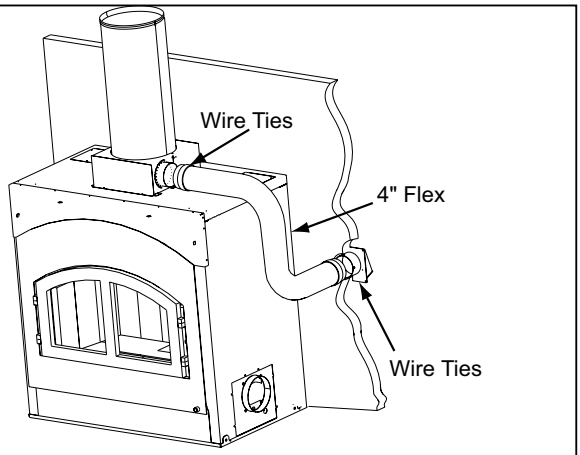


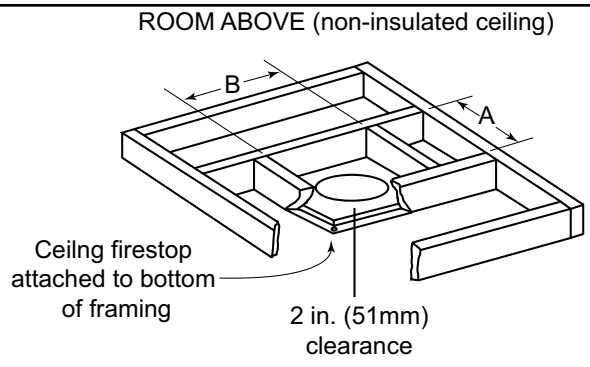
Figure 8.6 Installing Flex Pipe

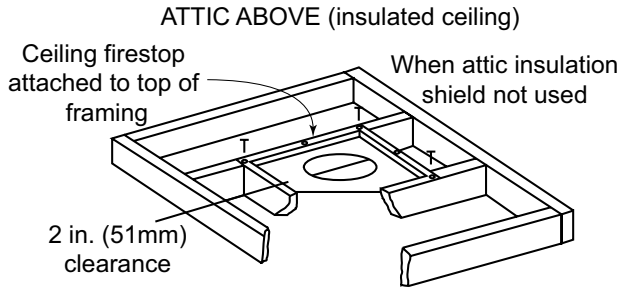
F. Install Ceiling Firestops

CAUTION! Risk of Fire! *Ceiling firestops must be used whenever the chimney penetrates a ceiling/floor.*

- Chase construction requires ceiling firestops at each floor or every 10 ft (3.05 m) of clear space.
- The ceiling firestop slows spread of fire and reduces cold air infiltration.
- Install a ceiling firestop whenever chimney penetrates ceiling/floor.
- Mark and cut an opening in ceiling as shown in Figure 8.7.
- Frame the opening with the same size lumber used in the ceiling joists.
- Nail the ceiling firestop to the bottom of the ceiling joists when there is a room above.
- Use an attic insulation shield if the ceiling is insulated. The ceiling firestop may then be attached above or below the joists.

WARNING! Risk of Fire! DO NOT *seal area between firestop opening and chimney pipe except where they enter the attic or leave the warm air envelope of the home (use 600° F sealant).*





Note: Use same dimensional lumber for framing ceiling firestop and joists.

Catalog #	A		B	
	in.	*mm*	*in.*	*mm*
FS338	14-1/2	368	14-1/2	368
FS339	14-1/2	368	18-3/8	467
FS340	14-1/2	368	23	584

Figure 8.7 Installing the Ceiling Firestop

G. Install Attic Insulation Shield

WARNING! Risk of Fire! *You MUST install an attic insulation shield when there is any possibility of insulation or other combustible material coming into contact with the chimney.*

- ***DO NOT*** *pack insulation between the chimney and the attic insulation shield.*
- *Failure to keep insulation and other materials away from chimney pipe could cause fire.*
- ***DO NOT*** *offset chimney inside insulation shield.*

Installation of a ceiling firestop is required

- Refer to Figures 8.8 - 8.10.
- Roll the shield (around the chimney if already installed) until you have a 3 in. (76 mm) overlap and the three holes on each side match up (large holes on top).
- Insert three screws into the matching holes to form a tube.
- Bend three tabs on the bottom of the tube inward to 90° to maintain chimney air space (refer to Figure 8.8).
- Rest the insulation shield on the ceiling firestop below.
- Bend the three short tabs at the top of the shield inward to 90° to maintain the 2 in. (51 mm) air space from the chimney.
- Bend the remaining top tabs to just meet the pipe.

If you wish to make a custom shield or barrier, follow these guidelines:

- Metal is preferred, although any material stiff enough to hold back the insulation can be used.

  WARNING! Risk of Fire! *Use of cardboard or other materials that can deflect under humidity or other environmental conditions is not recommended.*

- The shield or barrier must be tall enough to extend above the insulation and prevent blown-in insulation from spilling into the cavity.
- Maintain specified air spaces around chimney.
- Check instructions and local codes for further details.

H. Secure the Chimney

When offsets and returns are joined to straight pipe sections, they must be locked into position with the screws provided* (outer only), using the predrilled holes. To prevent gravity from pulling the chimney sections apart, the returns and the chimney stabilizers have hanger straps for securing these parts to joists or rafters. See Figure 8.11 on page 48.

* Use #6 or #8 sheet metal screw, or larger, no longer than 1/2 in. (13mm).

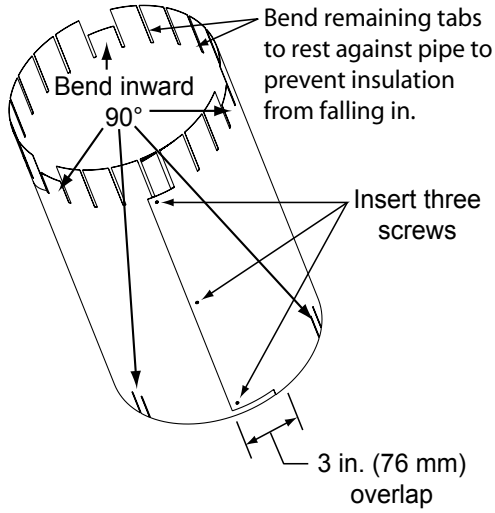

Bend remaining tabs to rest against pipe to prevent insulation from falling in.
Bend inward 90°
Insert three screws
3 in. (76 mm) overlap

Figure 8.8 Prepare Attic Insulation Shield

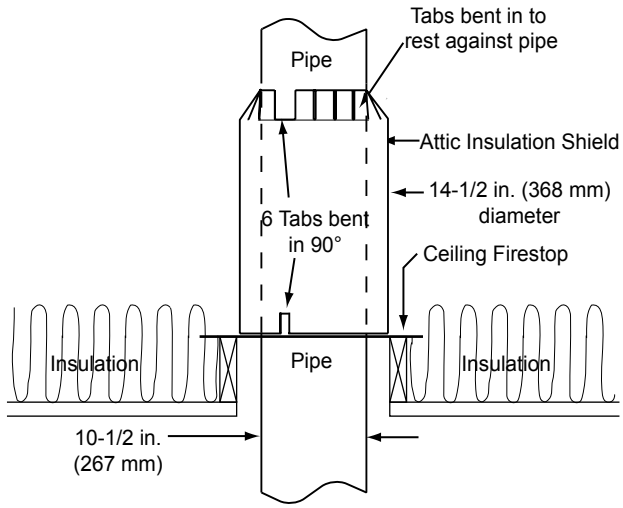


Figure 8.9 Install Attic Insulation Shield (firestop above ceiling)

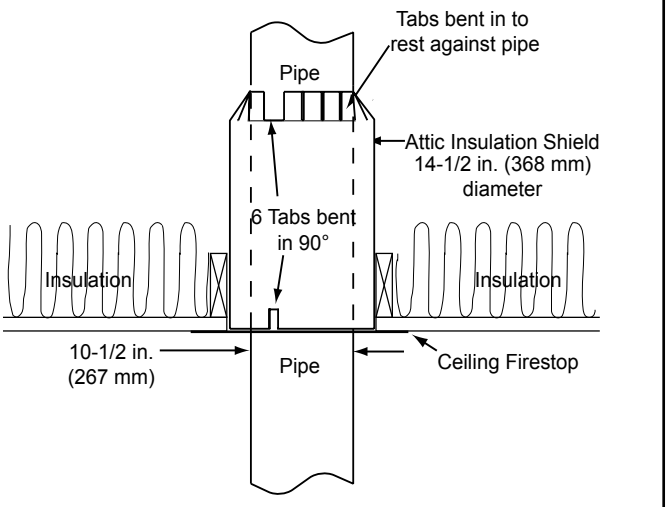


Figure 8.10 Install Attic Insulation Shield (firestop below ceiling)

WARNING! Risk of Fire!
Secure offsets with screws (not to exceed 1/2in./13mm in length).
Secure returns with strapping.
Straight chinney sections may be secured with screw (not to exceed 1/2in./13mm in length) at the joints
Keep chimney sections from separating or twisting.

I. Double-check the Chimney Assembly

Continue assembling the chimney sections up through the ceiling firestops as needed. While doing so, be aware of the height and unsupported chimney length limitations given under Section 8.A. Chimney Requirements.

Check each section by pulling up slightly from the top to ensure proper engagement before installing the succeeding sections. If they have been connected correctly, they will not disengage when tested.

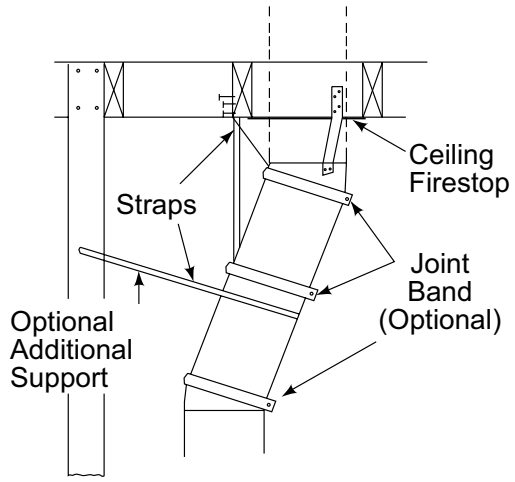


Figure 8.11 Secure the Chimney

J. Cut out Hole in Roof

- Refer to Figure 8.11.
- Plumb from roof to center of chimney.
- Drive a nail up through roof to mark center of pipe.
- Measure to either side of nail and mark the 14-1/2 in. x 14-1/2 in. (368 mm x 368 mm) opening required.
- Measure opening on the horizontal; actual length may be larger depending on roof pitch.
- Cut out and frame opening.
- Refer to **Chapter 25** of the **Uniform Building Code** for roof framing details.

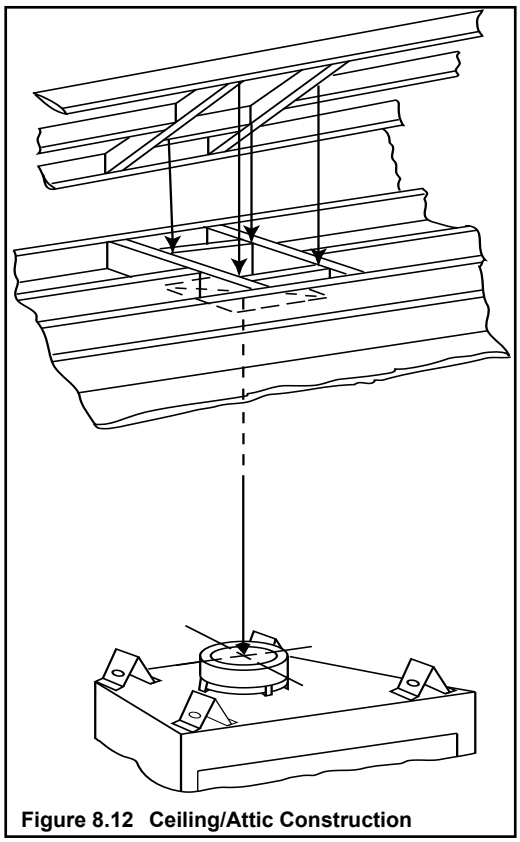


Figure 8.12 Ceiling/Attic Construction

K. Complete Installation

WARNING! Risk of Fire! *You MUST maintain 2 in. (51 mm) air space to insulation and other combustible materials around the chimney system. Failure to do so could cause overheating and fire.*

The following steps should be skipped if using a chase.

- Install roof flashing appropriate to roof pitch.
- Install round termination cap and storm collar.

L. Install Flashing

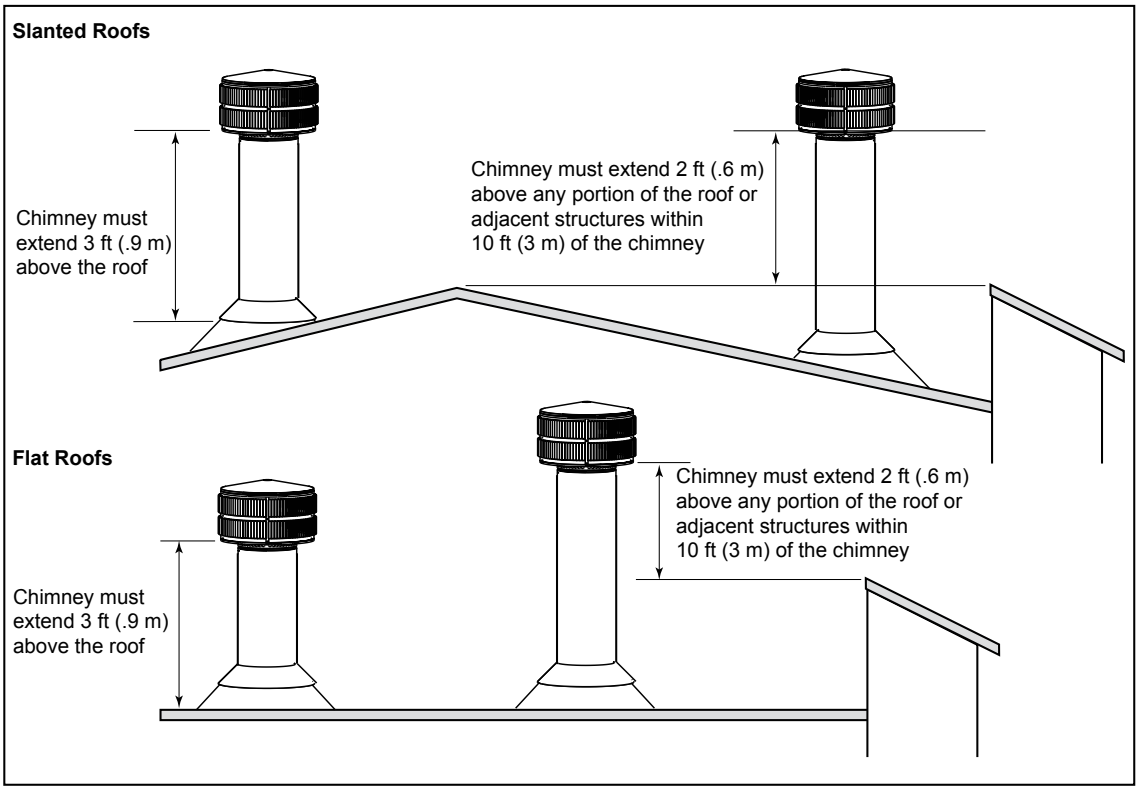
- Assemble chimney so it passes through the framed opening.
- Slip the flashing over the chimney.

NOTICE: *Roofing shingles must be below the flashing plate on the lower side of a sloped roof and over the flashing plate on the sides and top.*

- Nail the flashing to the roof. Keep gaps between the flashing plate and the roof to a minimum.
- Caulk the flashing plate and roof junction as well as the vertical seam on the flashing. All nail heads must be caulked with a roofing sealant.
- Caulk the overlap seam of any exposed pipe sections that are located above the roof line to prevent leaks.

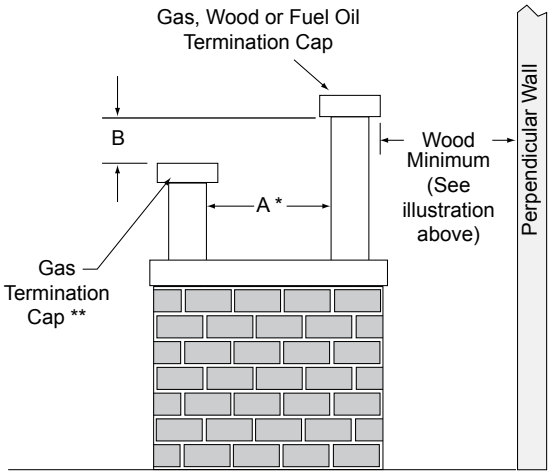
M. Chimney Termination Requirements

- Install a cap approved and listed for this fireplace system.
- Locate cap where it will not become plugged by snow or other materials.
- Locate cap away from trees or other structures.
- The bottom of the termination cap must be at least 3 ft (.91 m) above the roof AND at least 2 ft (.61 m) above any portion of roof within 10 ft (3.05 m) as shown in Figure 8.13
- The distance required between caps is shown in Figure 8.13.


Slanted Roofs
Chimney must extend 3 ft (.9 m) above the roof
Chimney must extend 2 ft (.6 m) above any portion of the roof or adjacent structures within 10 ft (3 m) of the chimney
Flat Roofs
Chimney must extend 3 ft (.9 m) above the roof
Chimney must extend 2 ft (.6 m) above any portion of the roof or adjacent structures within 10 ft (3 m) of the chimney

Multiple Chimney Locations

A	B
6 in. (minimum) up to 20 in. *152 mm/508 mm*	18 in. minimum *457 mm*
20 in. and over	0 in. minimum



* If using decorative cap cover(s), this distance may need to be increased. Refer to the installation instructions supplied with the decorative cap cover.

** In a staggered installation with both gas and wood terminations, the wood termination cap must be higher than the gas termination cap.

Figure 8.13 Multiple Chimney Locations

N. SL-300 Series Ceiling/Roof Thimble

NOTICE: *REQUIRED for manufactured homes.*

1. Locate the point where the chimney will exit the roof by plumbing down to the center of the chimney. Lay out, cut and frame a 14-1/2 in. (368 mm) square opening (measured on the horizontal) through the ceiling and roof structure. ***Consult local codes for framing details.***

2. The thimble must extend completely through the roof structure shielding combustible materials. Five location holes have been provided to allow for a variety of ceiling/ roof thicknesses. A Thimble Extension is required when the ceiling/roof thickness exceeds 12-1/2 in. (318 mm). The extension should overlap the thimble one inch.

3. To attach the extension to the thimble, drill 1/8 in. (3 mm) holes through the outer shield of the thimble using the predrilled holes in the extension as guides. Attach the extension to the thimble using the screws provided with the extension.

4. Install the thimble assembly and nail it securely to the framing members.

5. Center the flashing over the chimney and nail it to the roof using the *Stormguard* nails provided. Keep gaps between the flashing plate and the roof to a minimum. Caulk the flashing plate and roof junction as well as the vertical seam on the flashing. All nail heads must be caulked with a roofing sealant.

6. Finish assembling the chimney storm collar and termination cap following the installation instructions provided with them.

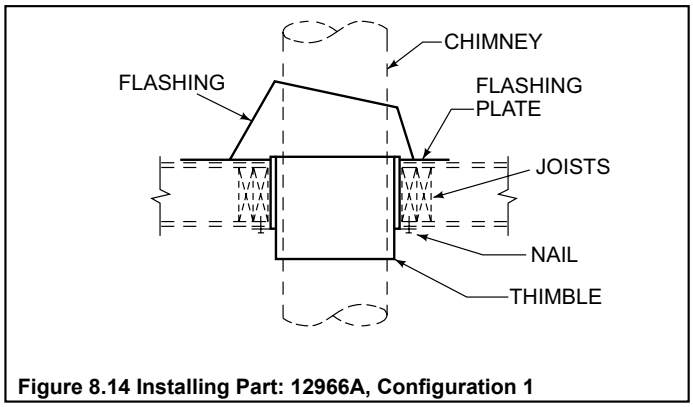


Figure 8.14 Installing Part: 12966A, Configuration 1

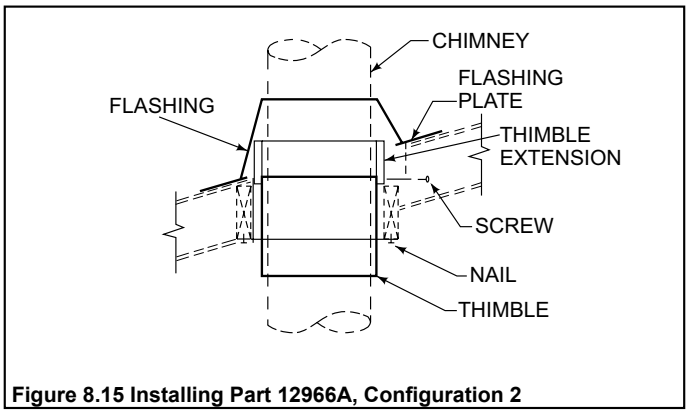


Figure 8.15 Installing Part 12966A, Configuration 2

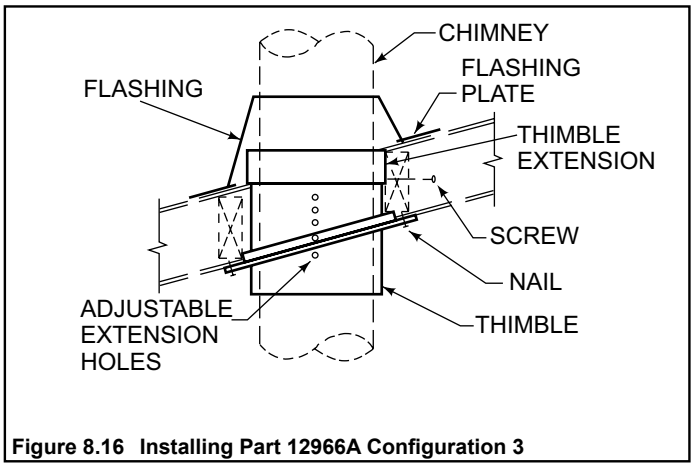


Figure 8.16 Installing Part 12966A Configuration 3

9 Chase Installations

A. Construct the Chase

A chase is a vertical boxlike structure built to enclose the fireplace and/or its vent system. Vertical chimneys that run on the outside of a building must be installed inside a chase.

In cold climates, it is recommended that the chase insulated using batt type insulation between the joists.

Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Local building codes MUST be checked.

Chases should be constructed in the manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelope in any manner. All outer walls need to be insulated.

Building codes require false ceiling and ceiling firestops at each floor of the chase or every 10 ft (3.05 mm) of clear space to control spread of fire.

Walls, ceiling, base plate and cantilever floor at the first level of the chase should be insulated. See Figure 9.1 Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, Hearth & Home Technologies recommends that the inside surfaces be sheet rocked and taped (or the use of an equivalent method) for maximum air tightness.

Holes and other openings should be caulked with high temperature caulk or stuffed with unfaced fiber glass insulation.

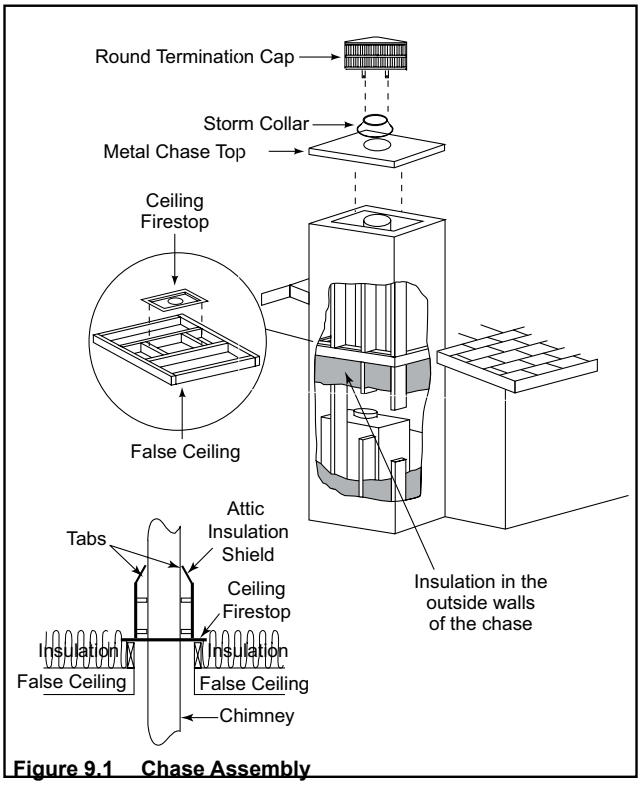


Figure 9.1 Chase Assembly

Three examples of chase applications are shown in Figure 9.2

1. Fireplace and chimney enclosed in an exterior chase.
2. Chimney offset through exterior wall and enclosed in chase.
3. Chase constructed on roof.

All outside walls should be insulated.

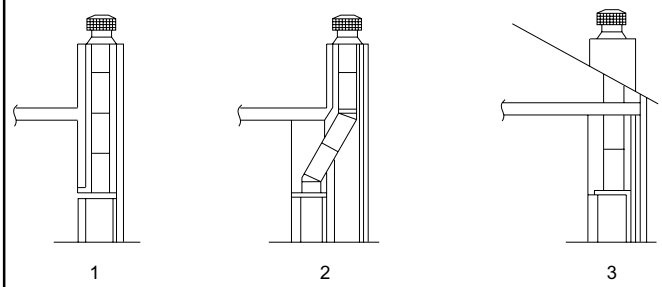


Figure 9.2 Chase Constructions

WARNING! *You must install false ceilings and ceiling firestops at each floor of the chase or every 10 ft (3.05 m) to control spread of fire.*

WARNING! Risk of Fire! DO NOT *seal area between fire stop opening and chimney pipe except where they enter the attic or leave the warm air envelope of the home (use 600° F sealant).*

WARNING! Risk of Fire! *You must maintain a minimum 2 in. (51 mm) air space clearance to insulation and other materials surrounding the chimney system.*

- *Insulation and other materials must be firmly secured to prevent accidental contact with chimney system.*
- *The chase must be properly blocked to prevent blown insulation or other combustibles from entering and making contact with fireplace or chimney.*
- *Failure to prevent contact between insulation or other materials and chimney system may cause overheating and fire.*

B. Install Fireplace & Chimney

Install as per Sections 7 and 8.

C. Install Chase Top

- You MUST use a chase top in a chase installation. Chase tops are available from your Heatilator dealer or may be field constructed.
- Include a turndown and drip edge to prevent water from seeping into the chase.
- Include a 2 in. (51 mm) soldered, welded or spun collar around pipe opening to keep water out.
- Provide a 1/8 in. (3 mm) gap around the flue pipe.
- Slope the chase top downward away from the opening.

  ***WARNING! Risk of Fire! DO NOT** caulk the pipe to the chase top collar.*

- Caulk all seams to prevent leaks.

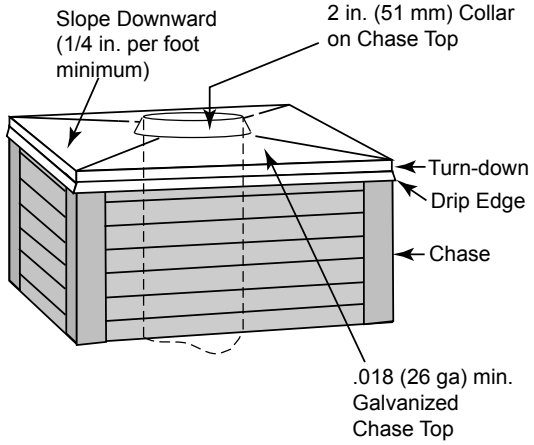


Figure 9.3 Chase Top Construction

D. Install Termination Cap

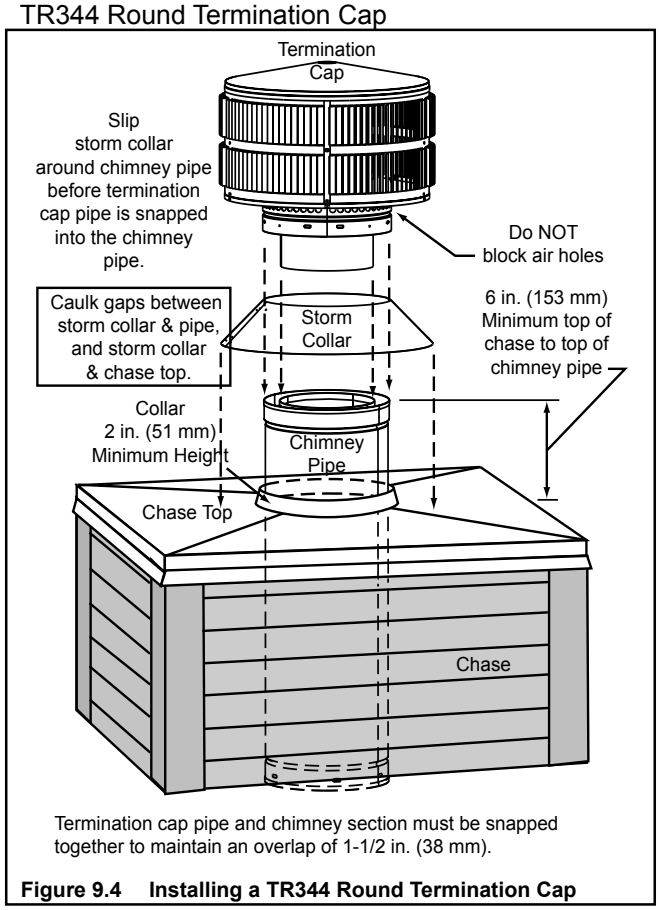
Install the chimney sections up through the chase enclosure.

- Caulk the overlap seam of any exposed pipe sections that are located above the roof line to prevent leaks.
- Refer to termination cap instructions.

  ***WARNING! Risk of Fire!** The minimum overlap of cap to pipe (as shown in the following illustrations) MUST be met or chimney may separate from cap. Separation allows sparks, heat and embers to escape.*

  ***NOTICE:** Paint the termination cap with a rust-resistant paint to protect against the effects of corrosion on those parts exposed to the weather.*

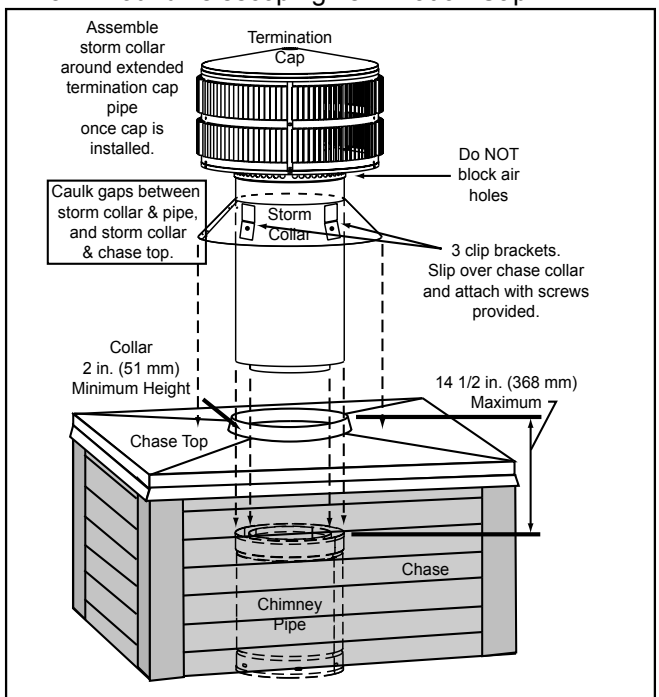
- TR344 Round Termination Cap



Termination cap pipe and chimney section must be snapped together to maintain an overlap of 1-1/2 in. (38 mm).

Figure 9.4 Installing a TR344 Round Termination Cap

- TR342 Round Telescoping Termination Cap



Termination cap pipe and chimney section must overlap 1-1/2 in. (38 mm)

Figure 9.5 Installing a TR342 Round Telescoping Termination Cap

- ST375 Square Termination Cap

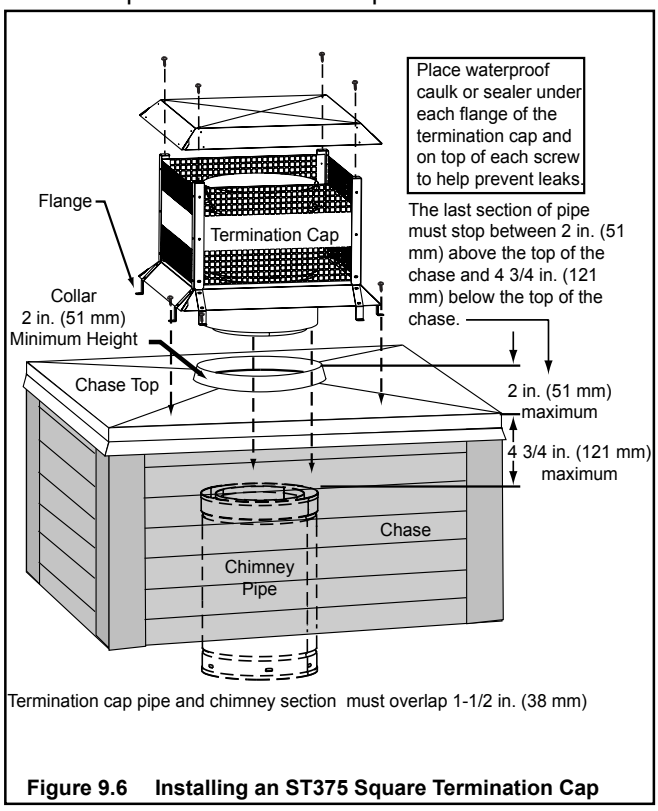

Place waterproof caulk or sealer under each flange of the termination cap and on top of each screw to help prevent leaks.
Flange
Termination Cap
The last section of pipe must stop between 2 in. (51 mm) above the top of the chase and 4 3/4 in. (121 mm) below the top of the chase.
Collar
2 in. (51 mm)
Minimum Height
Chase Top
2 in. (51 mm)
maximum
4 3/4 in. (121 mm)
maximum
Chase
Chimney
Pipe
Termination cap pipe and chimney section must overlap 1-1/2 in. (38 mm)

Figure 9.6 Installing an ST375 Square Termination Cap

- TS345/TS345P Square Termination Cap

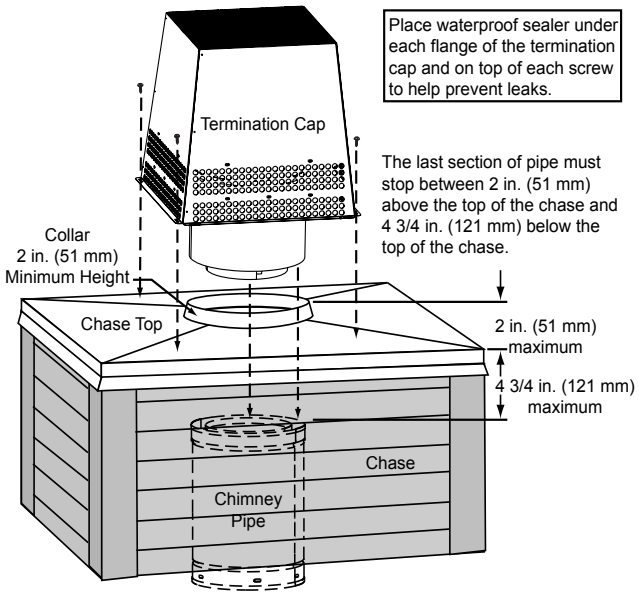

Place waterproof sealer under each flange of the termination cap and on top of each screw to help prevent leaks.
Termination Cap
The last section of pipe must stop between 2 in. (51 mm) above the top of the chase and 4 3/4 in. (121 mm) below the top of the chase.
Collar
2 in. (51 mm)
Minimum Height
Chase Top
2 in. (51 mm)
maximum
4 3/4 in. (121 mm)
maximum
Chase
Chimney
Pipe
Termination cap pipe and chimney section must overlap 1-1/2 in. (38 mm).

Figure 9.7 Installing a TS345/TS345P Square Termination Cap

- TCT375 Terra Cotta Cap

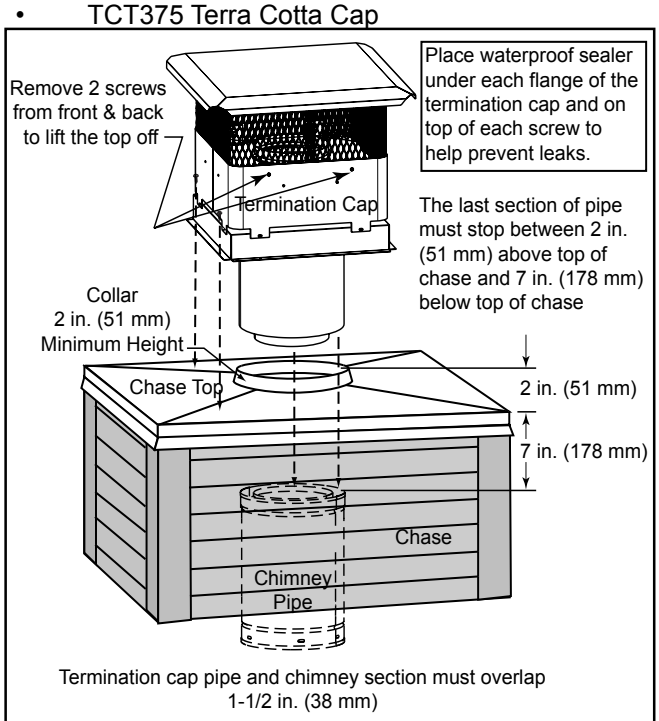

Remove 2 screws from front & back to lift the top off
Place waterproof sealer under each flange of the termination cap and on top of each screw to help prevent leaks.
Termination Cap
The last section of pipe must stop between 2 in. (51 mm) above top of chase and 7 in. (178 mm) below top of chase
Collar
2 in. (51 mm)
Minimum Height
Chase Top
2 in. (51 mm)
7 in. (178 mm)
Chase
Chimney
Pipe
Termination cap pipe and chimney section must overlap
1-1/2 in. (38 mm)

Figure 9.8 Installing a TCT375 Terra Cotta Cap

10 Finishing

A. Non-Combustible Materials

- Materials which will not ignite and burn, composed of any combination of the following:
  - Steel - Iron
  - Brick - Tile
  - Concrete - Slate
  - Glass - Plasters
- Materials reported as passing **ASTM E 136, Standard Test Method for Behavior of Metals, in a Vertical Tube Furnace at 750° C**

B. Combustible Materials

- Materials made of or surfaced with any of the following materials:
  - Wood - Compressed paper
  - Plant fibers - Plastic
- Any material that can ignite and burn; flame proofed or not, plastered or un-plastered

Table 10.1

R = 1/k x inches of thickness

Table 10.2

Hearth Extension Insulation Alternatives, R Value = 2.06			
Material	**k per inch thick**	**r per inch thick**	**Minimum thickness required**
Hearth & Home HX3, HX4	0.49	2.06	1 in.
USG Micore 300™	0.49	2.06	1 in.
USG Durock™ Cement Board	1.92	0.52	4 in.
Cement Mortor	5.0	0.20	10 1/2 in.
Common Brick	5.0	0.20	10 1/2 in.
Ceramic Tile	12.50	0.08	25 3/4 in.
Armstrong™ Privacy Guard Plus	0.046	2.18	1 in.
Marble	14.3-20.0	0.07-0.05	29 1/2 - 41 1/4 in.

C. Non-Combustible Facing Material Installation

WARNING! Risk of Fire!
Follow these instructions exactly.
Facing materials must be installed properly to prevent fire. No materials may be substituted without authorization by Hearth & Home Technologies

TOOLS NEEDED: Powered drill with #2 Phillips head bit; caulking gun.

1. Secure the fireplace to the floor or wall framing studs at a minimum of two attachment points to prevent further movement of the fireplace. The same holes and L brackets that attached the fireplace to the pallet may be used to secure the fireplace to the sub flooring by using a minimum of two 1/4 in. x 2 in. lag bolts or equivalent. Refer to Figure 10.1 and install the two metal hearth strips at this time.

   NOTE: *All boards are pre-drilled for your convenience.* ***Boards MUST be attached in the following order: bottom, top, and then the two sides.***

2. Attach the bottom board to the bottom of the outer fireplace can with enclosed screws, ensuring the board is centered.
3. Center and attach the top board to the outer can and framing members.
4. Using the Super Calstick, run a light bead (1/8 in. minimum) on the butt edges of the top board. See Figure 10.2
5. Ensuring the top of the side pieces and the top board align, attach the side pieces to the outer can and framing members.
6. Use a wet or dry towel or a soft brush to remove any dust or dirt from facing material. Apply a non-combustible adhesive to attach tile, stone or other non-combustible finishing materials per manufacturer's instructions.
7. The non-combustible Super Calstick may be used for sealing between the fireplace and the hearth extension. Refer to Figure 10.3.

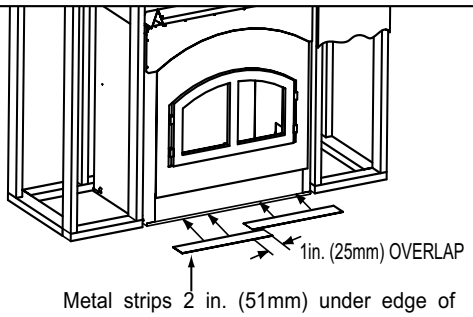

1in. (25mm) OVERLAP
Metal strips 2 in. (51mm) under edge of Fireplace and Hearth Extension and 2 in. (51mm) on both side of fireplace opening. Nail or screw metal strips in place.

Figure 10.1

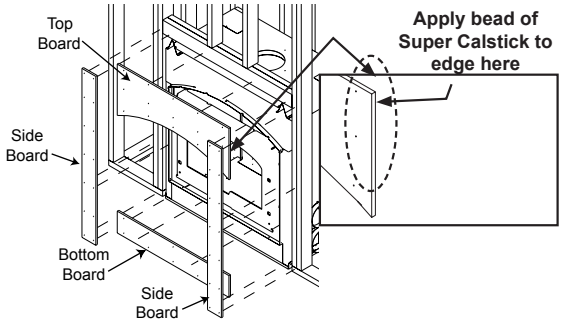


Figure 10.2

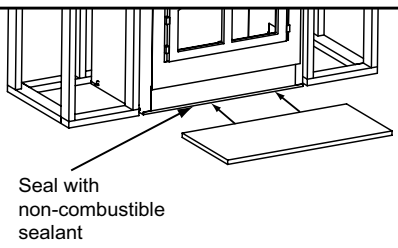


Figure 10.3

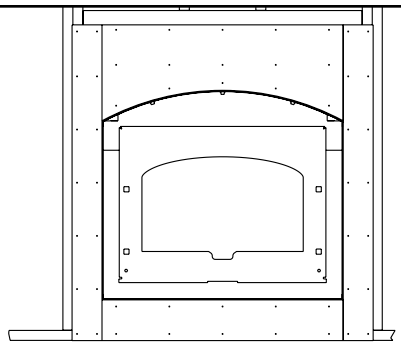


Figure 10.4 Complete installation

- **Non-Combustible Sealant Material**

  Sealants which will not ignite and burn: Super Calstick

After completing the framing and applying the facing material (drywall) over the framing, a bead of non-combustible sealant must be used to close off any gaps at the top and sides between the fireplace and facing to prevent cold air leaks. Large gaps can be bridged with fiberglass rope gasket.

Only non-combustible materials may be used to cover the metal fireplace front.

- **Cardboard OR Metal Template**

A cardboard template of the front is printed on the outside of the shipping box. It measures 1/8 in. (3 mm) bigger all the way around than the actual front. Cut out the template along the outside of the line for use in your installation. A metal template is also available for more durable continued use remaining accurate over time. See page 64 for catalog number.

Warning Fire Risk!
Maintain clearances
Use only non-combustible material below standoffs, material such as cement board is acceptable.
Framing or finishing material used on the front of, or in front of, the appliance closer than the minimums listed, must be constructed entirely of non-combustible materials (i.e., steel studs, concrete board, etc.).

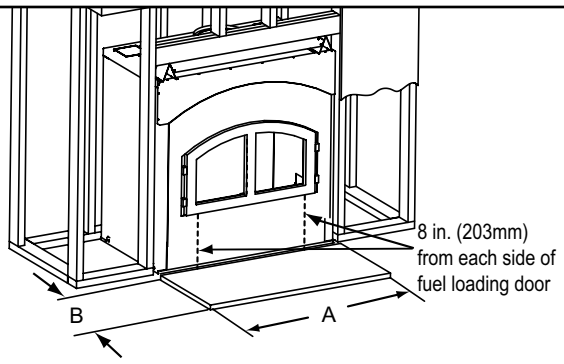
WARNING! Fire Risk
Hearth & Home Technologies is not responsible for discoloration, cracking or other material failures of finishing materials due to heat exposure or smoke.

- *Choose finishing materials carefully.*

D. Hearth Extension

WARNING! Risk of fire! *High temperatures, sparks, embers or other burning material falling from the fireplace may ignite flooring or concealed combustible surfaces.*

- *Protective metal hearth strips MUST be installed.*
- *Hearth extensions MUST be installed exactly as specified.*
- You MUST use a hearth extension with this fireplace.
- Refer to Figure 10.5 for minimum dimensions.
- This fireplace has been tested and approved for use with a hearth extension insulated to a minimum R value of 2.18.
- The hearth extension material MUST be covered with tile, stone or other non-combustible material.
- Manufactured hearth materials will usually have a published **R value** (resistance to heat) or **k value** (conductivity of heat). Refer to the formula in Table 10.1 to convert a k value to an R value,
- Refer to Table 10.2 for hearth extension insulation alternatives.



Model # Constitution		A	B
	in.	41	20
	mm	1041	508

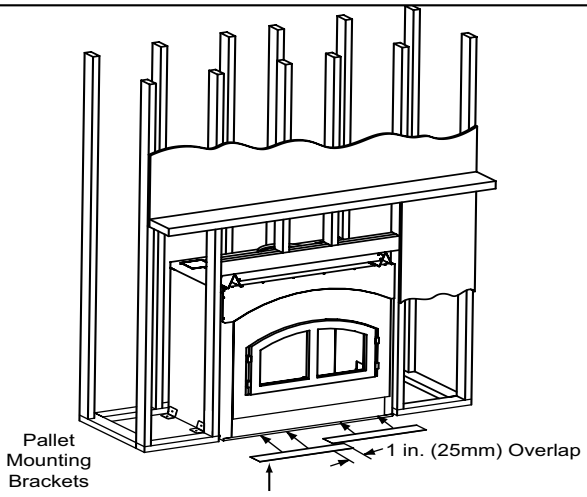
Figure 10.5 Hearth Extension Dimension

1. Position the Hearth Extension

Position and secure the hearth extension over the protective metal strips that have been placed partially under the fireplace front. These strips should be protruding approximately 2 in. (51 mm) from under the fireplace front and 2 in. (51 mm) on both sides of the fireplace opening. See Figure 10.6.

Seal the crack between the hearth extension and fireplace with a bead of non-combustible sealant. See Figure 10.12. Apply a non-combustible finishing material of your choice to the hearth extension.

NOTICE: *see pages 36-37 and 55, "clearances to combustibles, hearth extensions / floor protection" for clearances required for different hearth extension installations. The clearances must be strictly adhered to.*



Protective metal strips are placed 2 in.(51mm) under the front of the fireplace and must extend beyond the front and sides of fireplace opening by 2 in. (51mm). Nail or screw metal strips in place.

Figure 10.6 Positioning the Protective Metal Hearth Strips

Warning! Fire Risk!
Hearth extensions are to be installed only as illustrated to prevent high tempertures from occurring on concealed combustible materials.

Hearth sealing strips prevent burning or hot particles from inadvertently falling directly on combustible surfaces in the event the building should settle and disturb the original construction.

Raised Hearth Extension Framing

The hearth framing must be constructed of non-combustible materials (Table 10.2) and placed on an HX3 or HX4, or equivalent material (Figure 10.7). When creating the platform, allow for the thickness of the non-combustible finishing materials (Figure 10.10).

IMPORTANT! Hearth extension design must be determined before installation of fireplace.

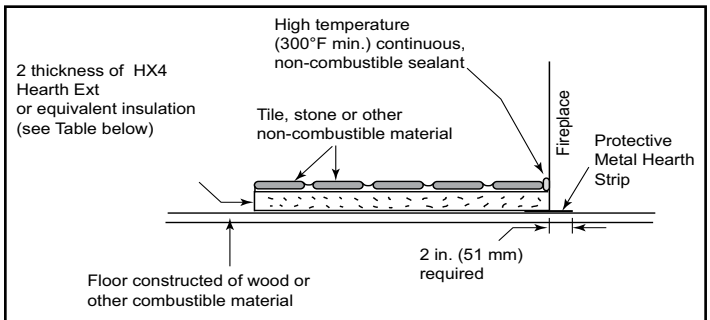


Figure 10.7 Hearth Extension Construction

The construction of, and materials used for a hearth extension are shown in Figures 10.5 and 10.8. A hearth extension of this construction may be covered with any non-combustible decorative material and may have a maximum thickness as per Figure 10.7 Seal gaps between the hearth extension and the front of the fireplace with a bead of non-combustible sealant.

2. Fireplace and Hearth Extension are flush on the floor:

Non-combustible flooring 20 in. (508mm) in front of and 8 in. (203mm) to either side of the fuel opening with a minimum thickness of 1 in. (25mm) and ("k" value = 0.49). See Figure 10.5 on page 54 and Figures 10.8, 10.9, and 10.10.

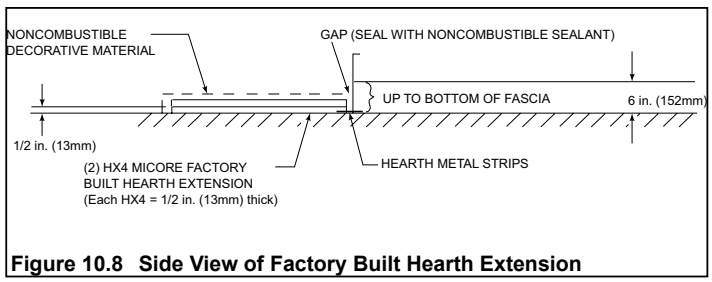


Figure 10.8 Side View of Factory Built Hearth Extension

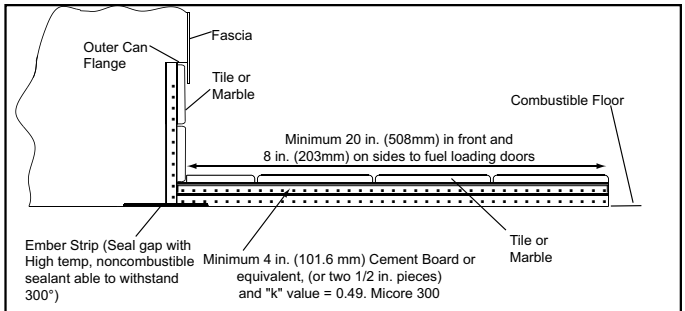

Outer Can Flange
Fascia
Tile or Marble
Combustible Floor
Minimum 20 in. (508mm) in front and 8 in. (203mm) on sides to fuel loading doors
Ember Strip (Seal gap with High temp, noncombustible sealant able to withstand 300°)
Minimum 4 in. (101.6 mm) Cement Board or equivalent, (or two 1/2 in. pieces) and "k" value = 0.49. Micore 300
Tile or Marble

Figure 10.9 Fireplace and Hearth Extension Flush on the Floor.

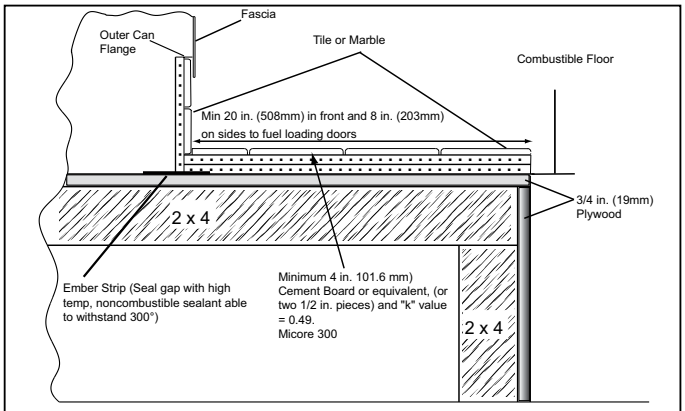

Fascia
Outer Can Flange
Tile or Marble
Combustible Floor
Min 20 in. (508mm) in front and 8 in. (203mm) on sides to fuel loading doors
2 x 4
3/4 in. (19mm) Plywood
Ember Strip (Seal gap with high temp, noncombustible sealant able to withstand 300°)
Minimum 4 in. 101.6 mm) Cement Board or equivalent, (or two 1/2 in. pieces) and "k" value = 0.49. Micore 300
2 x 4

Figure 10.10 Hearth Extension Flush on Floor but on Raised Platform

3. Fireplace is installed flush on the floor and Hearth Extension is raised to the bottom of the fascia:

Raised hearth must be constructed of non-combustible materials such as cement block or equivalent material. Non-combustible flooring on the raised hearth must be 20 in. (508 mm) in front of and 8 in. (203 mm) to either side of the fuel opening with a minimum thickness of 1 in. (25 mm) and ("k" value = 0.49). See Figure 10.11.

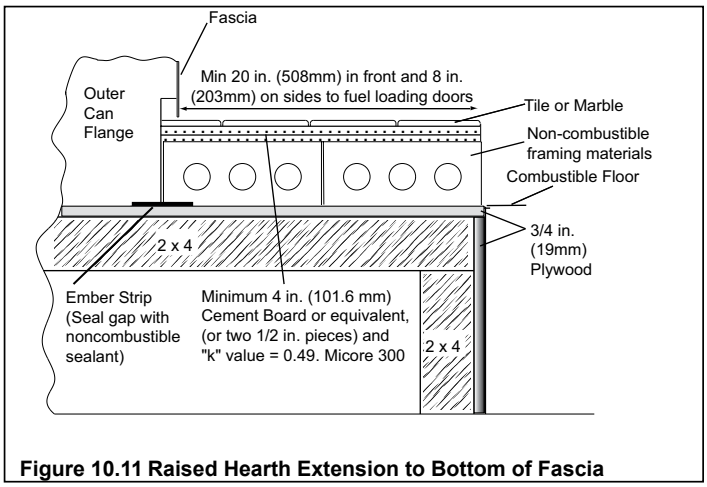

Fascia
Min 20 in. (508mm) in front and 8 in. (203mm) on sides to fuel loading doors
Outer Can Flange
Tile or Marble
Non-combustible framing materials
Combustible Floor
3/4 in. (19mm) Plywood
2 x 4
Ember Strip (Seal gap with noncombustible sealant)
Minimum 4 in. (101.6 mm) Cement Board or equivalent, (or two 1/2 in. pieces) and "k" value = 0.49. Micore 300
2 x 4

Figure 10.11 Raised Hearth Extension to Bottom of Fascia

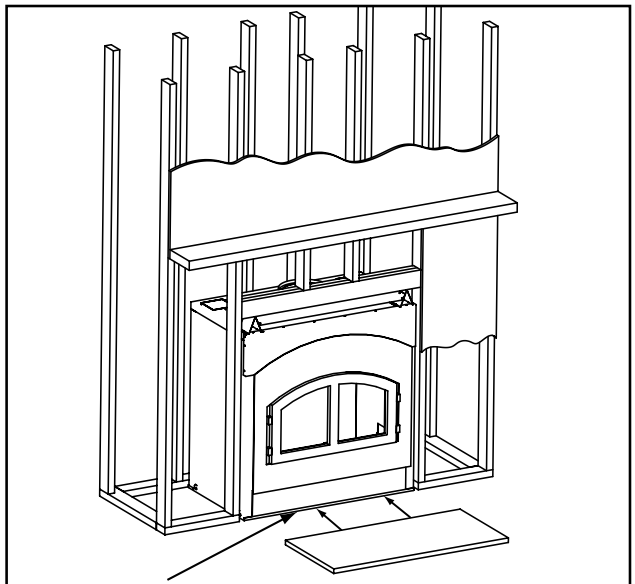


Figure 10.11 Position the Hearth Extension

E. Finishing Material

WARNING! *Do not install combustible materials over the metal fireplace face of the fireplace! This poses a safety hazard and may start a fire.*

You may only use noncombustible material over the metal face of the fireplace.

NOTICE: *The decorative fascia must be removable for future serviceability of the Automatic Combustion Control.*

- **Combustible Material**

  Materials made of or surfaced with wood, compressed paper, plant fibers, plastics, or other materials that can ignite and burn, whether flame proofed or not, or whether plastered or un-plastered shall be considered combustible materials.

- **Non-Combustible Material**

  Materials which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

  Materials that are reported as passing ASTM E 136, Standard Test Method for Behavior of Materials, in a Vertical Tube Furnace at 750°C, shall be considered non-combustible materials.

F. Mantel

A combustible mantel may be positioned no lower than 60 in. (1524mm) from the base of the fireplace.

The combustible mantel may have a maximum depth of 12 in. (305mm). Combustible trim pieces that project no more than 3/4 in. (19mm) from the face of the fireplace can be placed no closer than 6 in. (152mm) from the side of the decorative front. See Figure 10.13

Combustible trim must not cover:

- the metal surfaces of the fireplace
- where the non-combustible board is placed over the metal surfaces
- the space between the metal face of the fireplace and framing members.

Refer to page 37 for clearance requirements

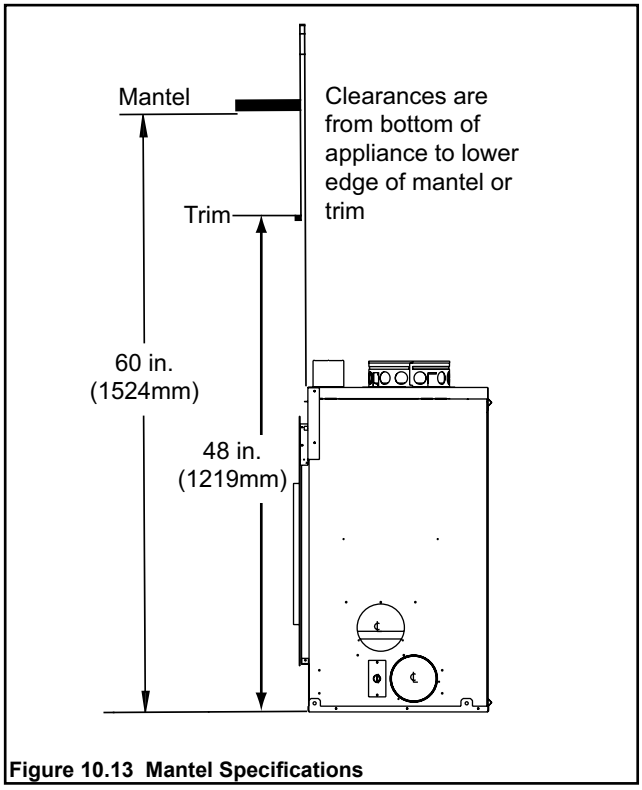


Figure 10.13 Mantel Specifications

11 Accessories

A. Heat Zone Kit (Optional)

This kit is tested and safe when installed in accordance with this installation manual. It is your responsibility to read all instructions before starting installation and to follow these instructions carefully during installations.

Installation of this kit **MUST** by performed by a qualified service technician.

The Heat-Zone-Wood kit is carefully engineered and must be installed only as specified. If you modify it or any of its components you will void the warranty and you may possibly cause a fire hazard. Installation must be done according to applicable local, state, provincial and/or national codes.

Plan the location of the fireplace and warm air duct run(s).

DUCT RUN REQUIREMENTS

MAXIMUM Duct Run = 40-ft. (12m)
MINIMUM Duct Run = 36 in. (914mm)

DUCTING MATERIAL

6 in. (152mm) B-Vent Only
DO NOT DUCT into existing furnace plenum

MINIMUM CLEARANCE TO COMBUSTIBLES

1 in. (25mm) from the B-Vent
1/2 in. (13mm) from top & bottom of outlet box
0 in. (0mm) from the sides of outlet box
12 in. (305mm) from wall register to ceiling
(See Figure 11.1).

Caution! *ALL wiring should be done by a qualified electrician and shall be in compliance with local codes and with the National Electric Code NFPA/NEC No. 70-current. CSC22.1 Canadian Electric Code.*

Possible Air Duct Runs / Locations

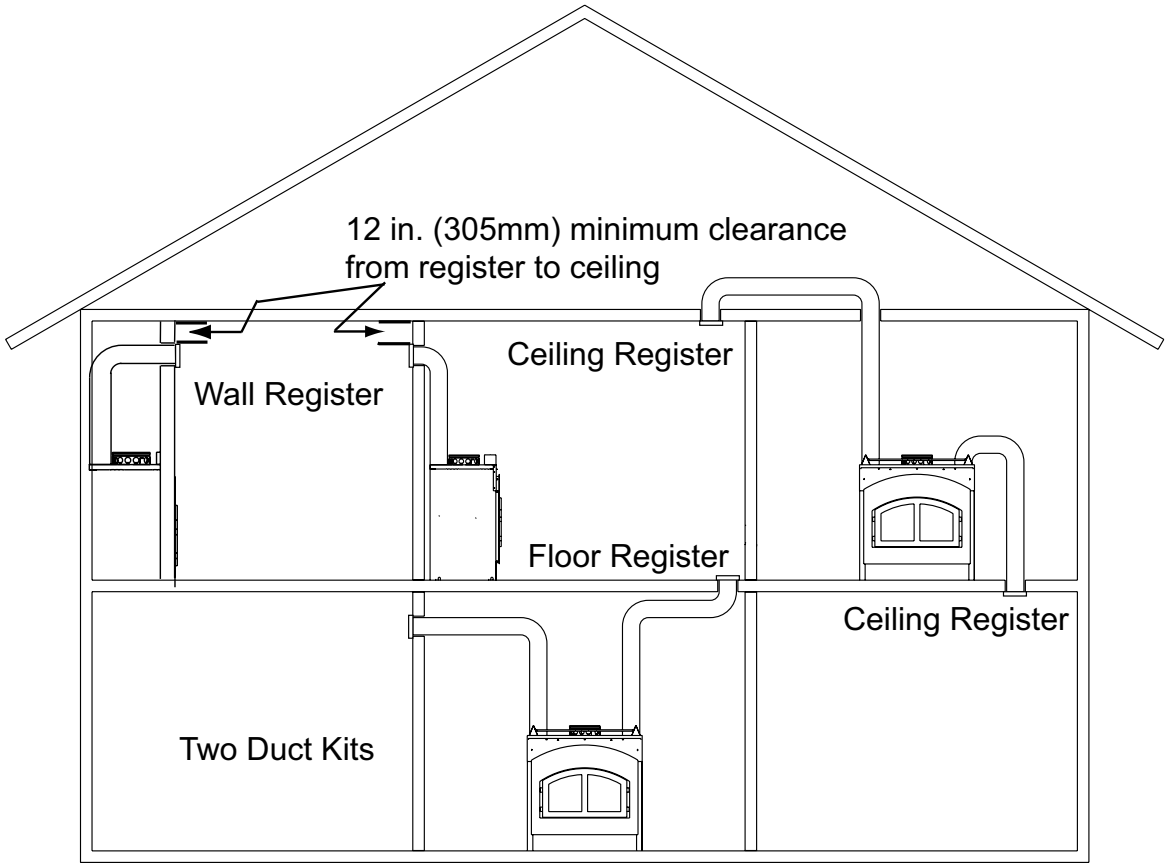


Figure 11.1 Minimum Clearances to Combustibles

INSTALLATION

1. Remove the knockout or cover plate from the top of the fireplace and discard it. See Figure 11.2.

2. Cut a 3 in. (76mm) hole in the insulation board as per the dimensions shown in Figure 11.2

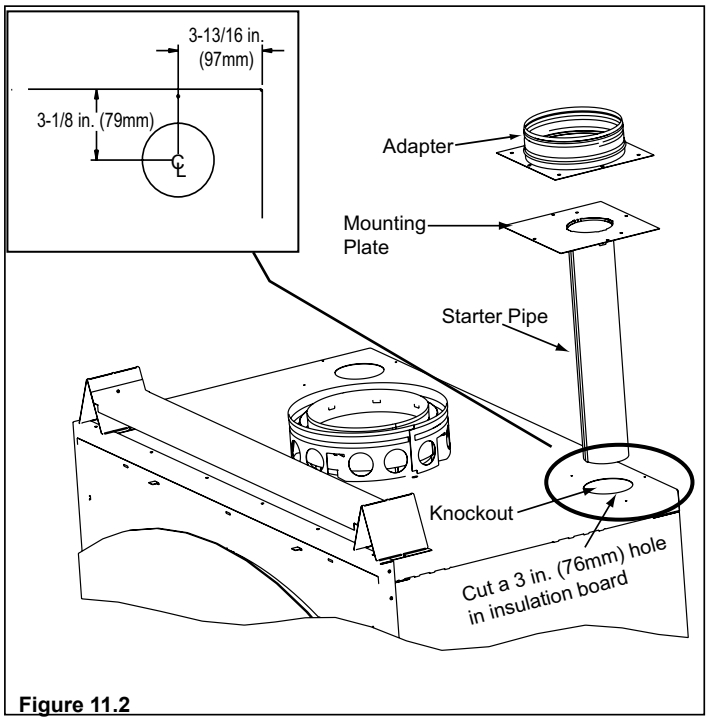


Figure 11.2

3. Determine the necessary length of starter pipe from the following table and cut as required. See Figure 11.3.

4. The starter pipe is shipped flat. After cutting to the required length, manually roll the pipe together and snap lock into place. ***NOTE: It is important the pipe length be adhered to or it will affect the performance of your fireplace.***

Run Length	**Cut Pipe**
20 - 40 ft (6-12m)	**2 in. (51mm)***
**A minimum of 2 in. (51mm) pipe must be used to cover the raw insulation to prevent it tfrom blowing out through the Return Air Grille.*	
10 - 20 ft (3 - 6m)	**8 in. (203mm)**
3 - 10 ft (1 - 3m)	**No cut needed****
***Use full 16 in. (406mm) as supplied*	

Figure 11.3

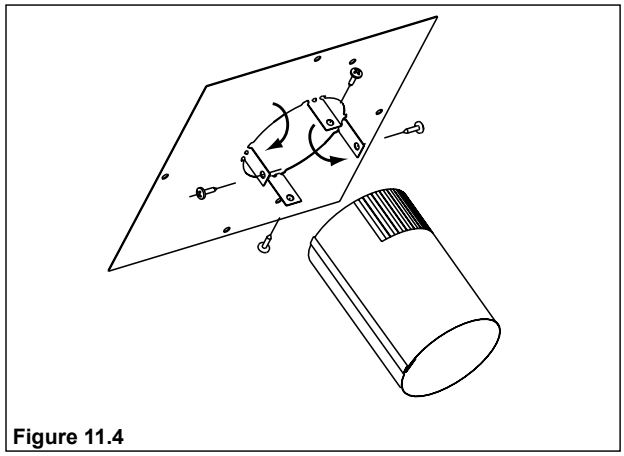


Figure 11.4

5. Slide the starter pipe into the fireplace, matching the holes in the plate to the holes in the fireplace.

6. Place the Adapter on the Mounting Plate lining up holes. Using the 4 sheet metal screws included in the kit, secure the Adapter and Mounting Plate into fireplace. After securing to the fireplace, tape down the Adapter edges to the top of the fireplace with aluminum tape to prevent leakage.

7. Determine the location for the air register and fan housing assembly. Cut a 7-5/8 in. x 13-5/8 in. (143 x 346mm) hole between framing members (wall studs or floor joists). The brackets can be rotated 180° and mounted to the back side of the 2 x 4 if necessary. See Figure 11.6 on page 61.

NOTICE: The fan and electrical connections must be accessible for servicing per local code requirements.

NOTE: If the fan housing is installed in a 2 x 4 wall, the front of the housing will protrude approximately 1/4 in. (6mm) from the finished wall. See Figure 11.5 on page 61.

8. Attach enough 6 in. (152mm) B-Vent as required for your installation to the fan housing. **A maximum of (4) 90° elbows is recommended.** Securely twist lock the B-Vent to the Adapter.

Also screw the B-Vent to the outlet box on the fan housing. See Figure 11.6 on page 61. Support duct at intervals of no greater than 4 ft (1 m) as required by local code.

Warning Fire Risk!

Comply with all minimum clearances specified.

- *A minimum 1 in. (13mm) air clearance must be maintained at the back and 1 in. (25mm) to the sides of the fireplace assembly.*

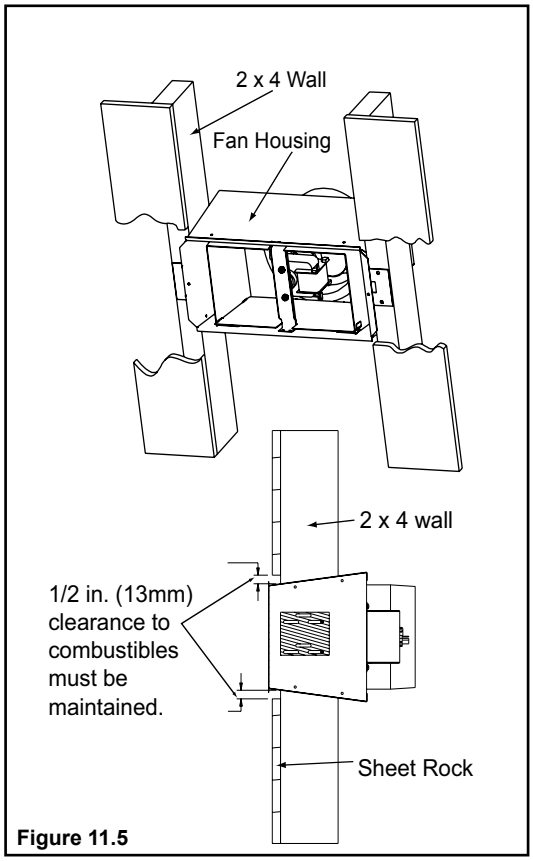


Figure 11.5

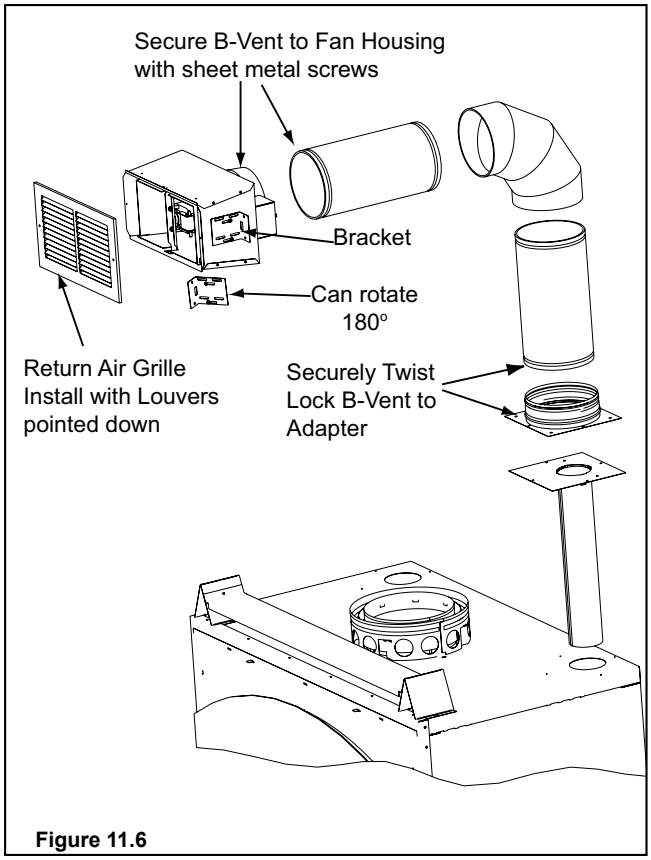

Secure B-Vent to Fan Housing with sheet metal screws
Bracket
Can rotate 180°
Return Air Grille Install with Louvers pointed down
Securely Twist Lock B-Vent to Adapter

Figure 11.6

NOTICE: *Secure the duct so that clearance to the fireplace outer wrap is maintained. Tape all seams with aluminum tape 1-1/4 in. (32mm) minimum width or as specified by local codes.)*

9. Seal all the way around the inside of the Return Air Grille to prevent hot air being drawn back into the venting system using gasketing supplied with the kit. Leave 1/4 in. (6mm) clearance from all 4 outer edges. Trim excess gasketing. See Figure 11.7

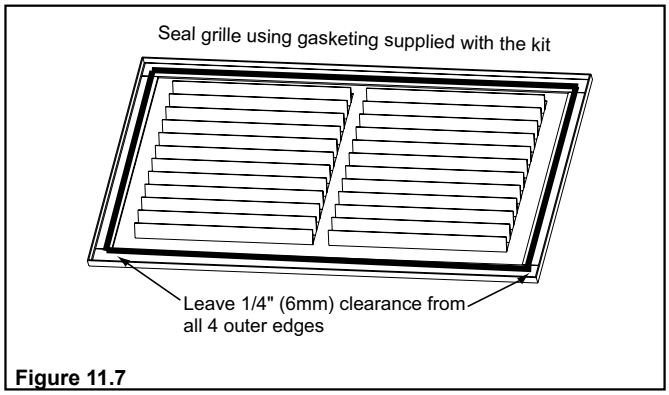


Figure 11.7

10. Install the variable speed wall rheostat (with setting on "OFF") in a convenient location. This switch will control the Heat-Zone fan operation.

11. Remove the Junction Box. Wire 110 VAC service TO the wall rheostat and FROM the wall rheostat to the fan Junction Box. Use wire nuts to secure the 110 VAC service wires to the hot (black) and neutral (white) fan wires and screw the 110 VAC ground wire to the Junction Box. See Figure 11.8.

12. Secure the Return Air Grille to the fan housing making sure it is flush. The grille must be installed with the louvers pointing down.

NOTICE: DO NOT USE ADJUSTABLE REGISTERS.

13. Complete the fireplace installations as per the instructions found in your Owner's Manual.

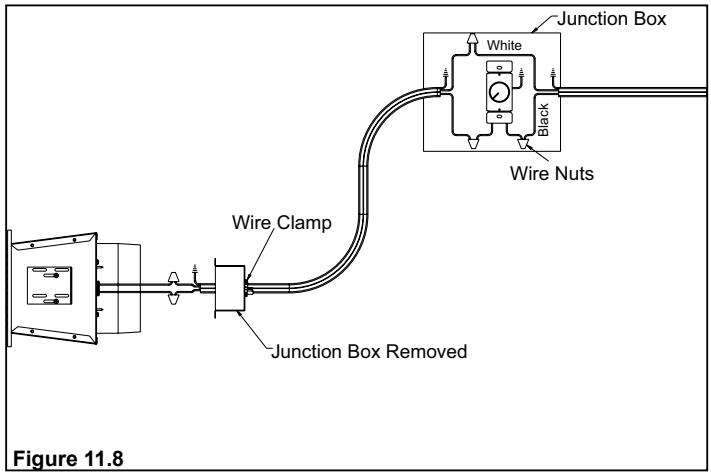


Figure 11.8

B. Firescreen

A firescreen must be used to control sparks if the homeowner choses to operate the fireplace with the doors open; and it must remain in place whenever the fireplace will be operating in this manner. Glass doors or firescreens must not be used to hold burning material inside the fireplace. Only those glass doors specifically tested and listed for use with the specific fireplace model should be used.

Use both hands to stabilize the screen. Ensure that the screen is fully attached. Be careful not to stack wood close to the front or too high that logs could roll out the front. Start with a small fire and adjust your heat to desired setting. If smoke spillage occurs, put on gloves and then remove the screen and close the doors. Refer to Troubleshooting Draft Problems on page 18.

WARNING! Fire Risk!

- *Close firescreen when burning fireplace.*
- *Do not use firescreen or glass doors to hold burning material in fireplace.*

Firescreen controls sparks.

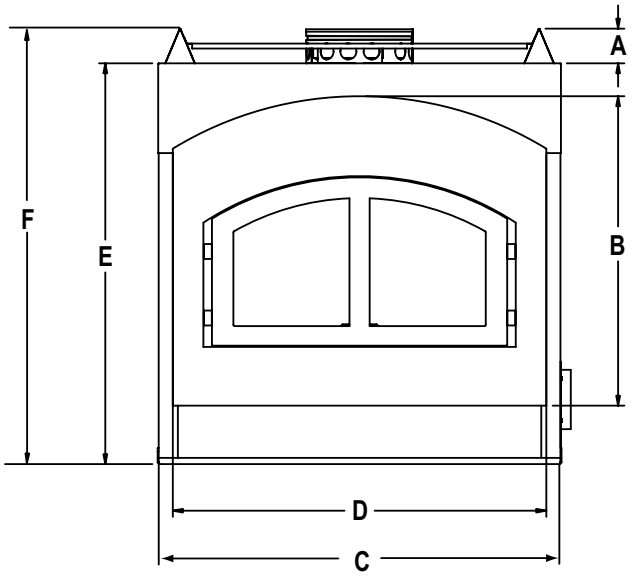
Glass may break or burning material may roll out.

- *Always wear gloves when installing or removing the screen as the screen may become extremely hot while in use.*

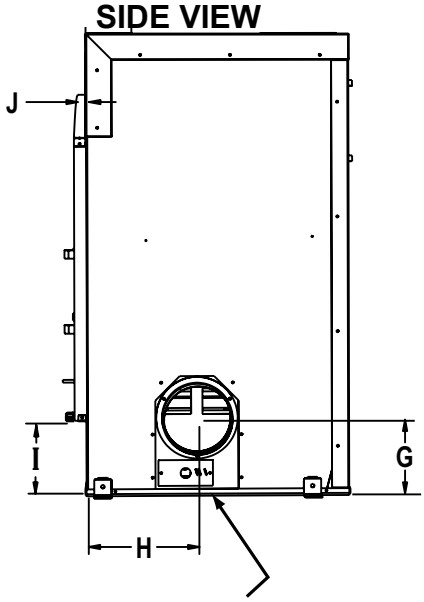
12 Reference Materials

A. Fireplace Dimensions

FRONT VIEW

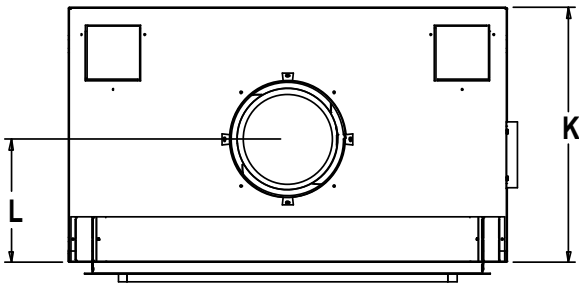


SIDE VIEW



Fan Electrical Access
(right side of fireplace)

TOP VIEW



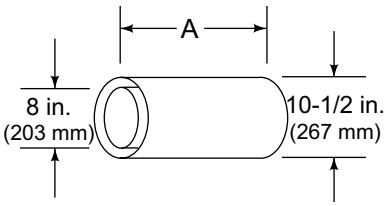
Constitution	A	B	C	D	E	F
in	3-1/2	31-1/8	40	37	40-5/16	43-13/16
mm	89	791	1016	940	1024	1100
	G	**H**	**I**	**J**	**K**	**L**
in.	6-1/2	9-11/16	5-7/8	1	23-1/8	11-1/8
mm	165	246	149	25	587	283

Figure 12.1

B. Chimney Components

The following drawings show the SL-300 Series chimney and fireplace components which may be safely used with this fireplace.

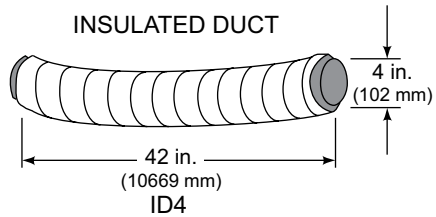
Catalog No.	Description	Catalog No.	Description
CAK4A	Chimney Air Kit	RF371	Roof Flashing - 6/12 to 12/12 Pitch
ID4	Insulated Duct / Outside Air	TR344	Round Termination Cap
UD4	Uninsulated Duct / Outside Air	TR342	Round Telescoping Termination Cap
SL306	Chimney Section - 6 in. (152mm) Long	ST375	Square Termination Cap
SL312	Chimney Section - 12 in. (305mm) Long	TS345	Square Termination Cap
SL318	Chimney Section - 18 in. (457mm) Long	DTO134	Short Octagon Decorative Cap
SL324	Chimney Section - 24 in. (610mm) Long	DTO146	Tall Octagon Decorative Cap
SL336	Chimney Section - 36 in. (914mm) Long	DTS134	Short Square Decorative Cap
SL348	Chimney Section - 48 in. (1219mm) Long	DTS146	Tall Square Decorative Cap
SL3	Chimney Stabilizer	CT35M	Chase Top (Sold in pack of 10)
SL315	Chimney Offset / Return - 15°	12966A	Manufactured Home Thimble Kit (Thimble & Flashing)
SL330	Chimney Offset / Return - 30°	MH841	Manufactured Home Thimble Extension, 20 in. (508 mm)
FS338	Firestop - Straight	HX4	Micore Hearth Extension, 20 in. (508 mm) wide
FS339	Firestop - 15°	Heatzone-Wood	Heat Zone Kit
FS340	Firestop - 30°	Mesh-HHT	Fire Screen
AS8	Straight Attic Insulation Shield	HHT-Template	Metal Face Template
JB877	Chimney Joint Band	Lintelbar-HHT	Lintel Bar
CB876	Chimney Bracket	TR-TVK	Round Termination Top Vent Kit
RF370	Roof Flashing - Flat to 6/12 Pitch		



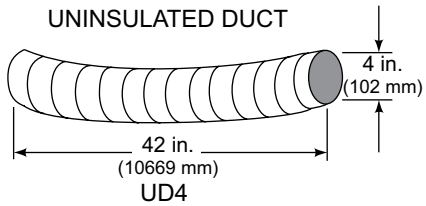
Chimney Sections

Catalog No.	A	B
SL306	6 in. (152 mm)	4-3/4 in. (121 mm)
SL312	12 in. (305 mm)	10-3/4 in. (273 mm)
SL318	18 in. (457 mm)	16-3/4 in. (425 mm)
SL324	24 in. (610 mm)	22-3/4 in. (578 mm)
SL336	36 in. (914 mm)	34-3/4 in. (883 mm)
SL348	48 in. (1219 mm)	46-3/4 in. (1187 mm)

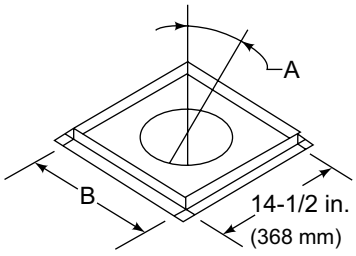
A = Actual Length
B = Effective length (length of chimney part after it has been snapped to another)



ID4

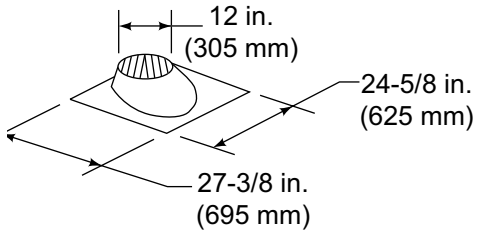


UD4

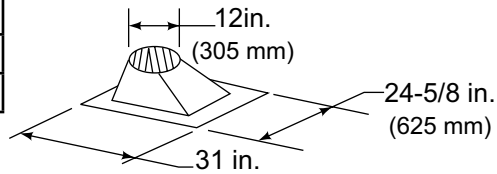


Firestop Spacer

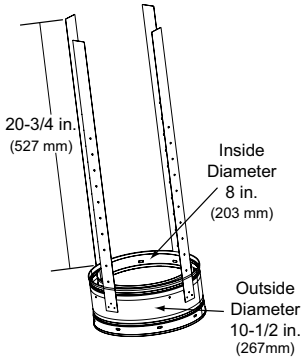
Catalog No.	A	B
FS338	0°	14-1/2" (368 mm)
FS339	15°	18-3/8" (467 mm)
FS340	30°	16-3/4" (425 mm)



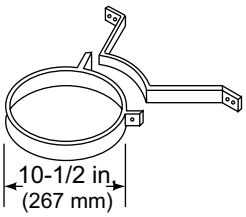
RF370 - Roof Flashing Flat to 6/12 Pitch



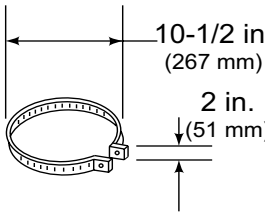
RF371 - Roof Flashing 6/12 to 12/12 Pitch



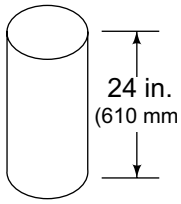
SL3 - Chimney Stabilizer



CB876
Chimney Bracket

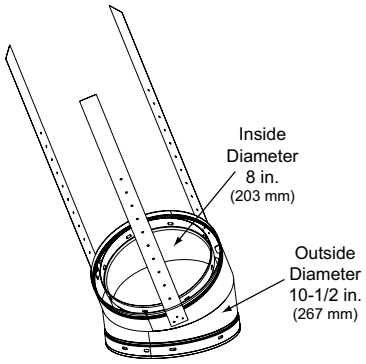


JB877
Joint Band

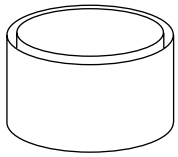


AS8
Straight Attic
Insulation Shield

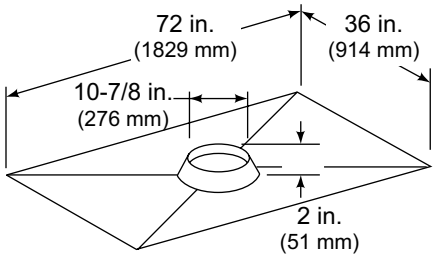
12966A
Manufactured Home Thimble



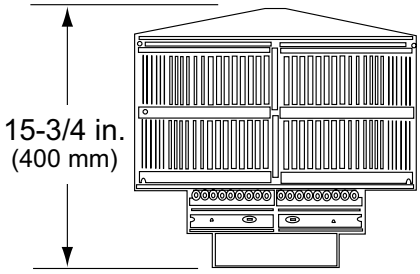
SL315-SL330 - Offset/Return



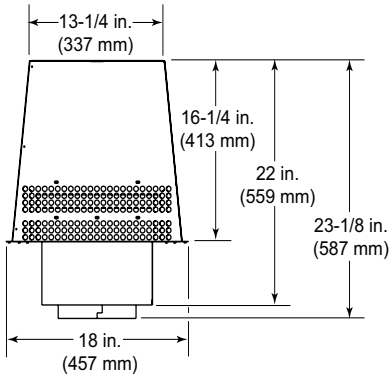
MH841
Manufactured Home Thimble
Extension 20 in. (508 mm)



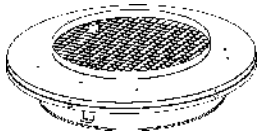
CT35M
Chase Top



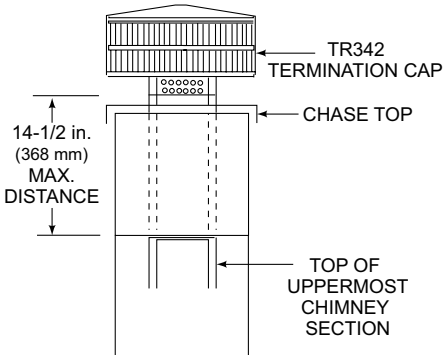
TR344
Round Termination Cap



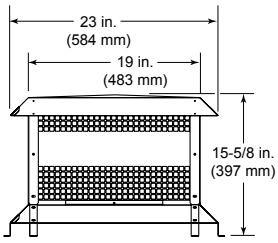
TS345/TS345P
Square Termination Cap



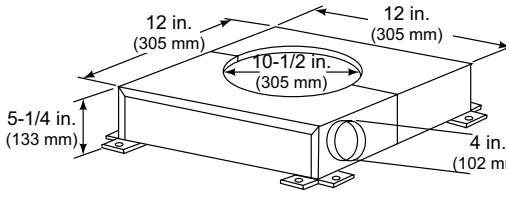
TR-TVK - Round
Termination Top Vent Kit



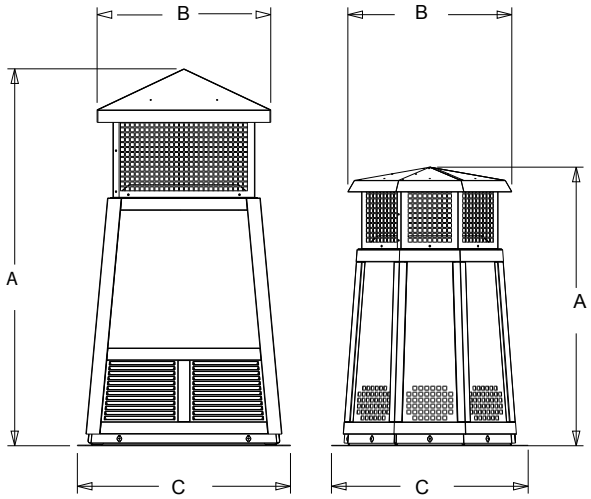
TR342
Round Telescoping
Termination Cap



ST375
Square Termination Cap



CAK4A
Chimney Air Kit



DTS134/DTS146 **DTO134/DTO146 Decorative Caps**

DTO134		A	B	C
	in	34	20	24
	mm	864	508	610
DTO146				
	in	46	22.7	26
	mm	1168	576	660

DTS134		A	B	C
	in	34	21.18	24
	mm	864	538	610
DTS146				
	in	46	21.18	26
	mm	1168	538	660

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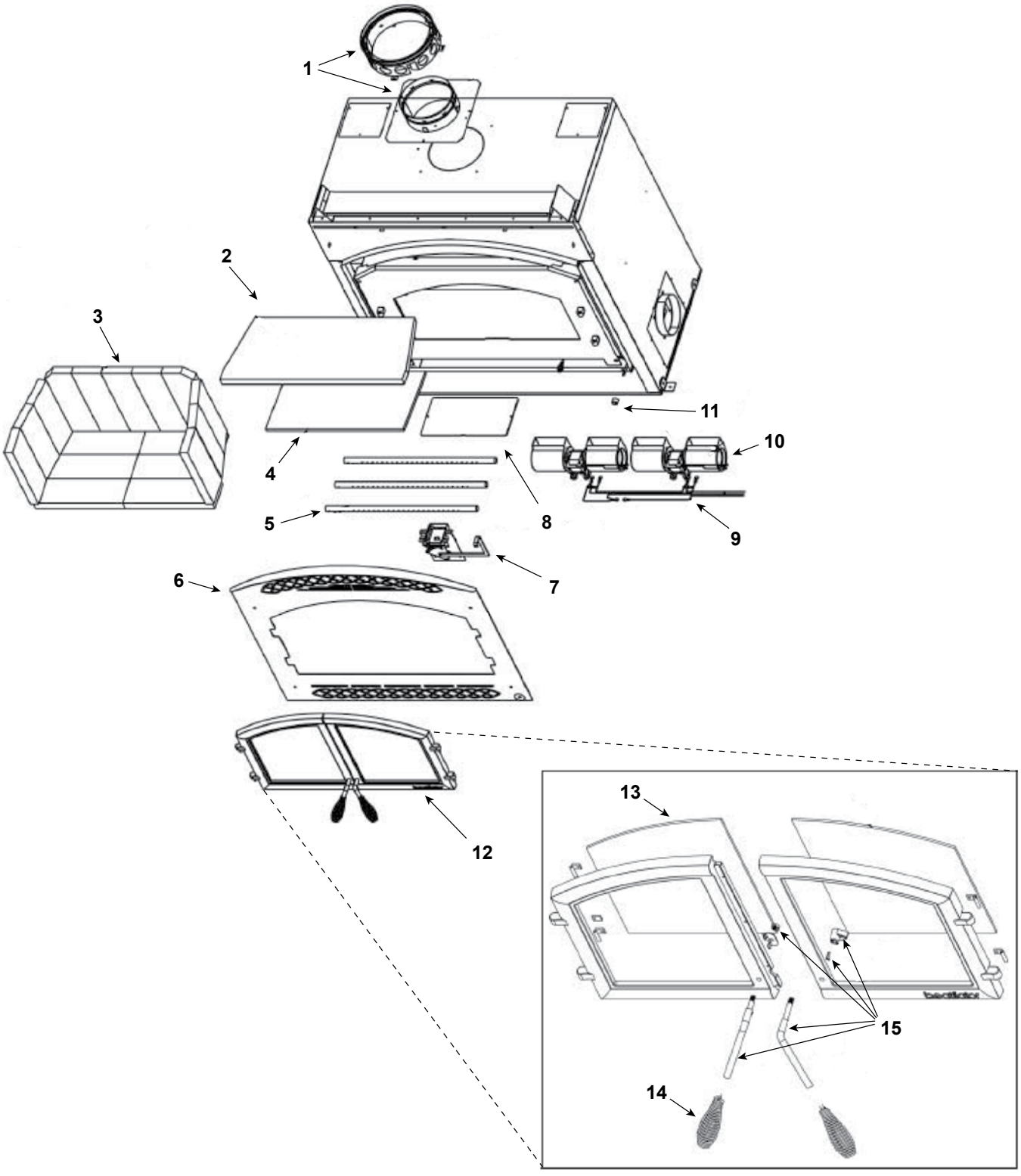
C. Service Parts

Constitution Woodburning Fireplace



Part number list on following page.

heatilator
The first name in fireplaces

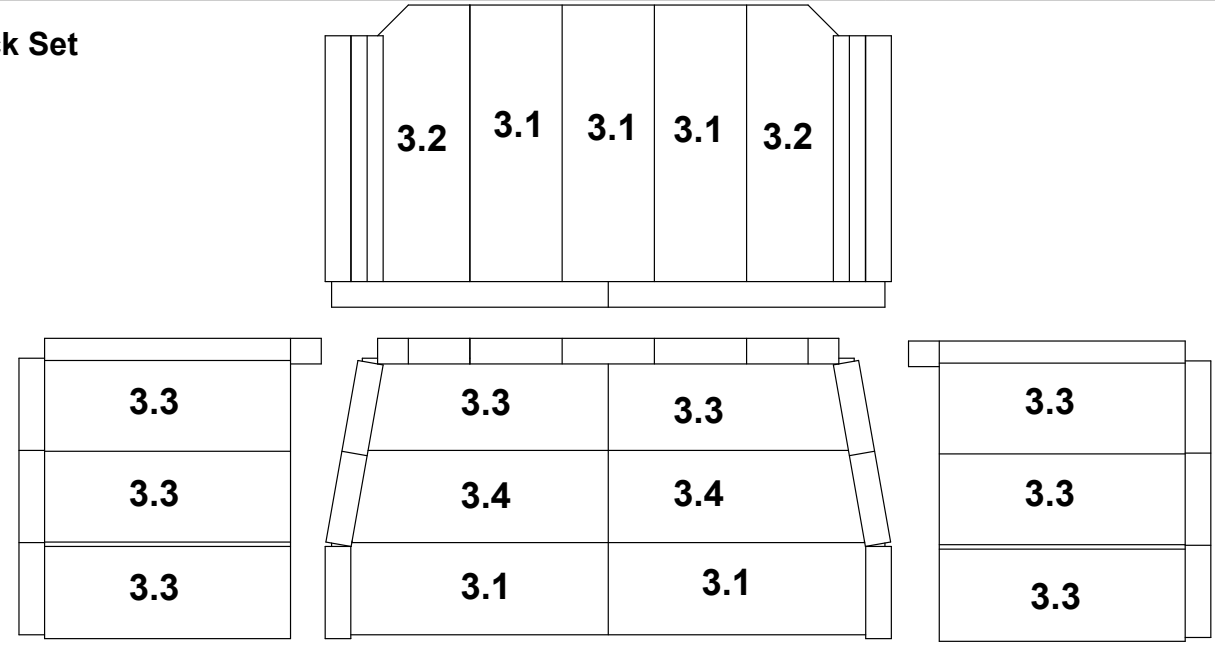
Service Parts

Beginning Manufacturing Date: June 2003
Ending Manufacturing Date: Active

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	Stocked at Depot
1	8 in. Starter Section		SL1	
2	Blanket, Kaowool		832-3401	**Y**

#3 Brick Set



3	Brick, Set		BRICK-480	
3.1	Brick, 13-1/4" x 4-1/2" x 1-1/4"	Qty 5 req	SRV7000-306	
3.2	Brick, 13-1/2" x 4-1/2" x 1-1/4", With 1-1/2" Chamfer	Qty 2 req	480-2270	
3.3	Brick, 12" x 4-1/2" x 1-1/4"	Qty 8 req	480-2280	
3.4	Brick 12-1/2" x 4-1/2" x 1-1/4"	Qty 2 req	480-2290	
4	Baffle, Fiberboard		SRV480-0510	**Y**
5	Manifold Tube (set of 3)		TUBES-480	**Y**
6	Facia		SRV480-5050	
7	Timer Assembly		SRV480-5150	**Y**
8	Blower Access Panel		433-0450	
9	Wiring Harness		SRV480-0990	**Y**
10	Blower Convection / Fan Replacement Motor		812-4900	**Y**
11	Knob, Outside Air (Black)		7000-246	**Y**
12	Door Assembly, Matte Black	Pre 0071553290	480-5130	
		Post 0071553290	SRV480-5490	
13	Glass Assembly for doors, 1pc, with Gasketing	Qty. 2 Reg.	480-5430	**Y**
14	Spring Handle, Door 1/2 in. (Black)		SRV7000-613	**Y**
	Spring Handle, Door 1/4 in. (Black)		SRV7000-614	**Y**
	Spring Handle, Door 1/2 in. (Gold)	Pkg of 2	832-0620	**Y**
	Spring Handle, Door 1/4 in. (Gold)	Pkg of 2	832-0630	**Y**

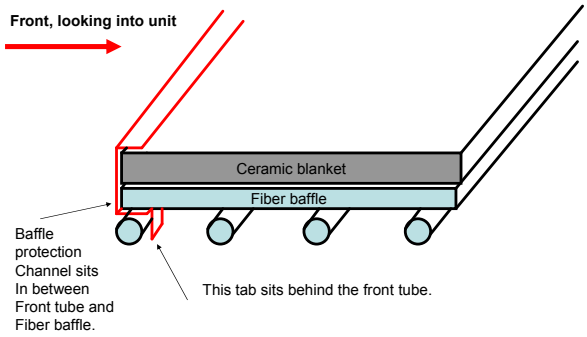
Additional service parts on following page

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	Stocked at Depot
15	Door Handle Assembly		HANDLES-480	

Baffle Protection Channel

Side view


Front, looking into unit
Ceramic blanket
Fiber baffle
Baffle protection Channel sits In between Front tube and Fiber baffle.
This tab sits behind the front tube.

16	Baffle Protection channel		480-2100	
	Bracket, Snap Disc Mounting		410-2521	
	Chimney Air Kit		CAK4A	
	Door Handle, Left		SRV480-0530	
	Door Handle, Right		SRV480-0520	
	Face Board Assembly Kit, Non -combustible board		480-5440	**Y**
	Fan Speed Control		SRV7000-143	**Y**
	Gasket Rope (Door), 1/2 in.	10 ft.	834-4170	**Y**
	Gasket Rope (Glass), 1/4 in.	10 ft.	834-1460	**Y**
	Gasket, Timer		480-1240	
	Glass Frame, Bottom		480-1450	
	Glass Frame, Top		480-1440	
	Header Shield		480-1130	
	Hearth Strip		18320	
	Latch, Magnet		229-0631	
	Light Switch		480-1260	
	Light Switch Cover Plate		480-1270	
	Manual Bag Assembly *(Owner's Manual, Spring Handles, Paint, Fan Switches, Cover Plate)*		SRV480-1150	
	Out Can Cover Plate		480-1300	
	Outside Air Hood, 6 in.		4059-051	
	Outside Air Shield		33271	**Y**
	Outside Air Termination		480-1160	
	Slider Control Assembly		480-5410	
	Snap Disc, Ceramic		SRV480-1730	**Y**
	Standoff Top		480-1040	
	Timer Replacement Assembly		SRV480-1940	**Y**
	Unit Collar		659-125	

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D. Contact Information

heatilator
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Heatilator, a brand of Hearth & Home Technologies Inc.
1915 W. Saunders St. Mt. Pleasant, IA 52641
www.heatilator.com

Please contact your Heatilator dealer with any questions or concerns.
For the location of your nearest Heatilator dealer,
please visit www.heatilator.com.

- NOTES -

CAUTION

DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

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